EDITORIAL

1 *The Journal of Immunology* Is Dead! Long Live *The Journal of Immunology*!
Frank W. Fitch

CUTTING EDGE

3 Testosterone Therapy Ameliorates Experimental Autoimmune Encephalomyelitis and Induces a T Helper 2 Bias in the Autoantigen-Specific T Lymphocyte Response
Mira Dalal, Sookhyun Kim, and Rhonda R. Voskuhl

7 IL-4 Secretion by $CD4^+NK1^+$ T Cells Induces Monocyte Chemoattractant Protein-1 in Early Listeriosis
Inge E. A. Flesch, Alexandra Wandersee, and Stefan H. E. Kaufmann

11 The Dominant Role of Bone Marrow-Derived Cells in CTL Induction Following Plasmid DNA Immunization at Different Sites
Akiko Iwasaki, Celia Aurora T. Torres, Pamela S. Ohashi, Harriet L. Robinson, and Brian H. Barber

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

15 Ca^{2+}-Dependent, Fas- and Perforin-Independent Apoptotic Death of Allografted Tumor Cells by a Type of Activated Macrophage
Ryotaro Yoshida, Antonio Sanchez-Bueno, Naoki Yamamoto, and Kuniko Einaga-Naito

22 The Immunosuppressive Metabolite of Leflunomide, A77 1726, Affects Murine T Cells Through Two Biochemical Mechanisms
Robert T. Elder, Xiulong Xu, James W. Williams, Haihua Gong, Alison Finnegan, and Anita S.-F. Chong

28 IL-12-Deficient Dendritic Cells, Generated in the Presence of Prostaglandin E_2, Promote Type 2 Cytokine Production in Maturing Human Naive T Helper Cells
Paweł Kaliński, Catharien M. U. Hilkens, Alies Snijders, Frank G. M. Snijdewint, and Martien L. Kapsenberg

36 Differential Expression of Transcription Directed by a Discrete NF-AT Binding Element from the IL-4 Promoter in Naive and Effector CD4 T Cells
Thomas M. Aune and Richard A. Flavell

44 Spontaneously Colitic C3H/HeJBir Mice Demonstrate Selective Antibody Reactivity to Antigens of the Enteric Bacterial Flora
Steven L. Brandwein, Robert P. McCabe, Yingzi Cong, Ken B. Waites, Ben U. Ridwan, Phillip A. Dean, Toshifumi Ohkusa, Edward H. Birkenmeier, John P. Sundberg, and Charles O. Elson

53 Defective TCR Stimulation in Anergized Type 2 T Helper Cells Correlates with Abrogated $p56^{lck}$ and ZAP-70 Tyrosine Kinase Activities
Alexander Faith, Cezmi A. Akdis, Mübeccel Akdis, Hans-Uwe Simon, and Kurt Blaser

61 Inactivation of *lck* and Loss of TCR-Mediated Signaling Upon Persistent Engagement With Complexes of Peptide:MHC Molecules
James E. Lee, Michael B. Cossoy, Luan A. Chau, Bhagirath Singh, and Joaquín Madrenas

70 Proto-Oncoprotein Vav Interacts with c-Cbl in Activated Thymocytes and Peripheral T Cells
Luc E. M. Marengère, Christine Mirtsos, Ivona Kozieradzki, André Veillette, Tak W. Mak, and Josef M. Penninger

77 Immunodominant $CD4^+$ T Cell Receptor Vβ Repertoires Involved in Graft-Versus-Host Disease Responses to Minor Histocompatibility Antigens
Marc A. Berger and Robert Korngold

86 Selective Expansion of Vγ2-Vδ7 TCRγδ Cells in C57BL/6 Mice Is Postnatal and Extrathymic
Anne I. Sperling, Donna C. Decker, Richard J. DiPaolo, Darryl A. Stern, Anthony Shum, and Jeffrey A. Bluestone

92 Regulation of Tumor Antigen Presentation by Urocanic Acid
Stefan Beissert, Taj Mohammad, Hideshi Torri, Antonietta Lonati, Zengmin Yan, Harry Morrison, and Richard D. Granstein

97 *Propionibacterium acnes* Treatment Diminishes $CD4^+NK1.1^+$ T Cells but Induces Type I T Cells in the Liver by Induction of IL-12 and IL-18 Production from Kupffer Cells
Kiyoshi Matsui, Tomohiro Yoshimoto, Hiroko Tsutsui, Yasuko Hyodo, Nobuki Hayashi, Keisai Hiroishi, Norifumi Kawada, Haruki Okamura, Kenji Nakanishi, and Kazuya Higashino

107 Inhibition of Primary and Recall Allergen-Specific T Helper Cell Type 2-Mediated Responses by a T Helper Cell Type 1 Stimulus
Dorothy E. Scott, Inna Agranovich, John Inman, Michael Gober, and Basil Golding

117 TGF-β Down-Regulates Stromal IL-7 Secretion and Inhibits Proliferation of Human B Cell Precursors
Jihong Tang, Bonnie L. Nuccie, Ion Ritterman, Jane L. Liesveld, Camille N. Abboud, and Daniel H. Ryan

126 Bcl-2 Expression in Target Cells Leads to Functional Inhibition of Caspase-3 Protease Family in Human NK and Lymphokine-Activated Killer Cell Granule-Mediated Apoptosis
Claire Renvoizé, Rémi Roger, Nathalie Moulian, Jacques Bertoglio, and Jacqueline Bréard

135 *xid* Affects Events Leading to B Cell Cycle Entry
Kurt Brorson, Mark Brunswick, Sergei Ezhevsky, Datsen George Wei, Ryan Berg, David Scott, and Kathryn E. Stein

144 Interaction of CTLA-4 with the Clathrin-Associated Protein AP50 Results in Ligand-Independent Endocytosis That Limits Cell Surface Expression
Ellen Chuang, Maria-Luisa Alegre, Colin S. Duckett, Patricia J. Noel, Matthew G. Vander Heiden, and Craig B. Thompson

152 Direct MHC Class I Complementary DNA Transfer to Thymus Induces Donor-Specific Unresponsiveness, Which Involves Multiple Immunologic Mechanisms
Stuart J. Knechtle, Jue Wang, Christian Graeb, Yuan Zhai, Xuening Hong, John H. Fechner, Jr., and Edward K. Geissler

159 Requirement of CD4 T Cells for Skin Graft Rejection Against Thymus Leukemia (TL) Antigen and Multiple Epitopes on the TL Molecule Recognized by CD4 T Cells
Kazuhide Tsuji, Yuichi Obata, Toshitada Takahashi, Jiro Arata, and Eiichi Nakayama

167 In Vivo Mechanism by Which Leflunomide Controls Lymphoproliferative and Autoimmune Disease in MRL/MpJ-*lpr/lpr* Mice
Xiulong Xu, Leonard Blinder, Jikun Shen, Haihua Gong, Alison Finnegan, James W. Williams, and Anita S.-F. Chong

175 TGF-β Inhibits IL-2-Induced Tyrosine Phosphorylation and Activation of Jak-1 and Stat 5 in T Lymphocytes
John J. Bright, Lawrence D. Kerr, and Subramaniam Sriram

184 CD38 Ligation in Human B Cell Progenitors Triggers Tyrosine Phosphorylation of CD19 and Association of CD19 with Lyn and Phosphatidylinositol 3-Kinase
Akira Kitanaka, Chikako Ito, Elaine Coustan-Smith, and Dario Campana

193 CD38 Ligation Results in Activation of the Raf-1/Mitogen-Activated Protein Kinase and the CD3-ζ/ζ-Associated Protein-70 Signaling Pathways in Jurkat T Lymphocytes
Mercedes Zubiaur, Manolo Izquierdo, Cox Terhorst, Fabio Malavasi, and Jaime Sancho

206 Expression and Role in Apoptosis of the α- and β-Chains of the IFN-γ Receptor on Human Th1 and Th2 Clones
Francesco Novelli, Mario M. D'Elios, Paola Bernabei, Laurence Ozmen, Laura Rigamonti, Fabio Almerigogna, Guido Forni, and Gianfranco Del Prete

214 Antigen Specificity of Dual Reactive T Hybridomas Determines the Requirement for CD40 Ligand-CD40 Interactions
Minette E. Ozaki, Lars Karlsson, Per A. Peterson, and Susan R. Webb

222 FcεRIγ Can Support T Cell Development and Function in Mice Lacking Endogenous TCR ζ-Chain
Elizabeth Shores, Véronique Flamand, Tom Tran, Alexander Grinberg, Jean-Pierre Kinet, and Paul E. Love

231 B Cell Antigen Receptor Desensitization: Disruption of Receptor Coupling to Tyrosine Kinase Activation
Barbara J. Vilen, Sara J. Famiglietti, Amy M. Carbone, Brian K. Kay, and John C. Cambier

MOLECULAR AND STRUCTURAL IMMUNOLOGY

244 Structural Requirements for Assembly of Dimeric IgA Probed by Site-Directed Mutagenesis of J Chain and a Cysteine Residue of the α-Chain CH2 Domain
Sonja Krugmann, Richard J. Pleass, Julie D. Atkin, and Jenny M. Woof

250 Structure and Genomic Organization of a Second Class of Immunoglobulin Light Chain Genes in the Channel Catfish
Seyed H. Ghaffari and Craig J. Lobb

259 Isolation and Characterization of 2′-Fluoro-, 2′-Amino-, and 2′-Fluoro-/Amino-Modified RNA Ligands to Human IFN-γ That Inhibit Receptor Binding
Mark F. Kubik, Carol Bell, Tim Fitzwater, Susan R. Watson, and Diane M. Tasset

268 The α Subunit Cytoplasmic Domain Regulates the Assembly and Adhesiveness of Integrin Lymphocyte Function-Associated Antigen-1
Cha-Fen Lu and Timothy A. Springer

HOST DEFENSE

279 Refocusing Neutralizing Antibody Response by Targeted Dampening of an Immunodominant Epitope
Robert R. Garrity, Guus Rimmelzwaan, Anton Minassian, Wen-Po Tsai, George Lin, Jean-Jacques de Jong, Jaap Goudsmit, and Peter L. Nara

290 Human Alveolar T Lymphocyte Responses to *Mycobacterium tuberculosis* Antigens: Role for $CD4^+$ and $CD8^+$ Cytotoxic T Cells and Relative Resistance of Alveolar Macrophages to Lysis
Jeanette S. Tan, David H. Canaday, W. Henry Boom, Kithiganahalli N. Balaji, Stephan K. Schwander, and Elizabeth A. Rich

298 Production of IL-18 (IFN-γ-Inducing Factor) Messenger RNA and Functional Protein by Murine Keratinocytes
Sabine Stoll, Gabriele Müller, Masashi Kurimoto, Joachim Saloga, Tadao Tanimoto, Hiroshi Yamauchi, Haruki Okamura, Jürgen Knop, and Alexander H. Enk

303 The Intronic Region of an Incompletely Spliced *gp100* Gene Transcript Encodes an Epitope Recognized by Melanoma-Reactive Tumor-Infiltrating Lymphocytes
Paul F. Robbins, Mona El-Gamil, Yong F. Li, Ellen B. Fitzgerald, Yutaka Kawakami, and Steven A. Rosenberg

309 NKR-P1A Stimulation of Arachidonate-Generating Enzymes in Rat NK Cells Is Associated with Granule Release and Cytotoxic Activity
M. Grazia Cifone, Paola Roncaioli, Luisa Cironi, Claudio Festuccia, Antonietta Meccia, Simona D'Aló, Dario Botti, and Angela Santoni

318 Macrophage Inflammatory Protein-1α (MIP-1α) Is Required for the Efferent Phase of Pulmonary Cell-Mediated Immunity to a *Cryptococcus neoformans* Infection
Gary B. Huffnagle, Robert M. Strieter, Lisa K. McNeil, Roderick A. McDonald, Marie D. Burdick, Steven L. Kunkel, and Galen B. Toews

328 IL-12 Treatment Attenuates T Helper Cell Type 2 and B Cell Responses but Does Not Improve Vaccine-Enhanced Lung Illness
Tracy Hussell, Usman Khan, and Peter Openshaw

335 Determinants of T Cell Reactivity to the *Mycobacterium leprae* GroES Homologue
Jenny Kim, Alessandro Sette, Stuart Rodda, Scott Southwood, Peter A. Sieling, Vijay Mehra, Jeffrey D. Ohmen, Jennifer Oliveros, Ettore Appella, Yuichiro Higashimoto, Thomas H. Rea, Barry R. Bloom, and Robert L. Modlin

344 Differential CD45 Isoform Expression Accompanies Reduced Natural Antibody Binding in L5178Y-F9 Tumor Progression
Zi Yuan Zhang and Donna A. Chow

351 Eradication of Murine Bladder Carcinoma by Intratumor Injection of a Bicistronic Adenoviral Vector Carrying cDNAs for the IL-12 Heterodimer and Its Inhibition by the IL-12 p40 Subunit Homodimer
Ling Chen, Dongshu Chen, Ellen Block, Michael O'Donnell, Donald W. Kufe, and Steven K. Clinton

360 A Mechanism for Selective Recruitment of CD8 T Cells into B7-1-Transfected Plasmacytoma: Role of Macrophage-Inflammatory Protein 1α
Maja Maric, Lieping Chen, Barbara Sherry, and Yang Liu

INFLAMMATION

369 Expression of a Biologically Active Recombinant Mouse IL-1 Receptor Antagonist and Its Use In Vivo to Modulate Aspects of the Acute Phase Response
Sharon Grehan, Clarissa M. Uhlar, Robert B. Sim, Jeff Herbert, and Alexander S. Whitehead

379 IL-13 Inhibits TNF Production but Potentiates That of IL-6 In Vivo and Ex Vivo in Mice
Elena Di Santo, Cristina Meazza, Marina Sironi, Paolo Fruscella, Alberto Mantovani, Jean D. Sipe, and Pietro Ghezzi

383 Effect of the Inducible Nitric Oxide Synthase Inhibitors Aminoguanidine and L-N^6-(1-Iminoethyl)lysine on Zymosan-Induced Plasma Extravasation in Rat Skin
Victoria C. Ridger, E. Roy Pettipher, Clare E. Bryant, and Susan D. Brain

391 Endotoxin Induces Expression of Type II Phospholipase A2 in Macrophages During Acute Lung Injury in Guinea Pigs: Involvement of TNF-α in Lipopolysaccharide-Induced Type II Phospholipase A2 Synthesis
Laurence Arbibe, Daniel Vial, Isabelle Rosinski-Chupin, Nathalie Havet, Michel Huerre, B. Boris Vargaftig, and Lhousseine Touqui

401 Transgenic Monocyte Chemoattractant Protein-1 (MCP-1) in Pancreatic Islets Produces Monocyte-Rich Insulitis Without Diabetes: Abrogation by a Second Transgene Expressing Systemic MCP-1
Iqbal S. Grewal, Barbara J. Rutledge, Joseph A. Fiorillo, Long Gu, Ronald P. Gladue, Richard A. Flavell, and Barrett J. Rollins

409 Fc Receptor-Triggered Insertion of Secretory Granules into the Plasma Membrane of Human Neutrophils: Selective Retrieval During Phagocytosis
Hans Tapper and Sergio Grinstein

419 Differential Regulation of Indoleamine 2,3-Dioxygenase Expression by Nitric Oxide and Inflammatory Mediators in IFN-γ-Activated Murine Macrophages and Microglial Cells
Daniela Alberati-Giani, Pari Malherbe, Paola Ricciardi-Castagnoli, Christer Köhler, Suzanne Denis-Donini, and Andrea M. Cesura

427 Shared TCR Vβ Gene Expression by the Pancreas and Salivary Gland in Immunodeficient Alymphoplasic Mice
Masahiro Yamamichi, Naoki Matsuoka, Tsutomu Tomioka, Katsumi Eguchi, Shigenobu Nagataki, and Takashi Kanematsu

433 Outside-In Signaling by Lipopolysaccharide Through a Tailless Integrin
Robin R. Ingalls, M. Amin Arnaout, and Douglas T. Golenbock

439 Cyclooxygenase-2-Dependent Delayed Prostaglandin D_2 Generation Is Initiated by Nerve Growth Factor in Rat Peritoneal Mast Cells: Its Augmentation by Extracellular Type II Secretory Phospholipase A_2
Makoto Murakami, Kinji Tada, Ko-ichi Nakajima, and Ichiro Kudo

447 Recombinant Histamine-Releasing Factor Enhances IgE-dependent IL-4 and IL-13 Secretion by Human Basophils
John T. Schroeder, Lawrence M. Lichtenstein, and Susan M. MacDonald

CLINICAL IMMUNOLOGY

454 Genetic Dissection of Systemic Lupus Erythematosus Pathogenesis: *Sle2* on Murine Chromosome 4 Leads to B Cell Hyperactivity
Chandra Mohan, Laurence Morel, Ping Yang, and Edward K. Wakeland

466 Role of Macrophages and Macrophage-Derived Cytokines in the Pathogenesis of Kilham Rat Virus-Induced Autoimmune Diabetes in Diabetes-Resistant BioBreeding Rats
Young-Hwa Chung, Hee-Sook Jun, Yup Kang, Kensuke Hirasawa, Byoung-Rai Lee, Nico Van Rooijen, and Ji-Won Yoon

472 Identification of Rat Prostatic Steroid-Binding Protein as a Target Antigen of Experimental Autoimmune Prostatitis: Implications for Prostate Cancer Therapy
Ko-Jiunn Liu, Gurkamal S. Chatta, Daniel R. Twardzik, Thomas S. Vedvick, Lawrence D. True, A. Gregory Spies, and Martin A. Cheever

481 Clonal Expansion of $CD8^+$ T Cells in Kawasaki Disease
In-Hong Choi, Yong-Jun Chwae, Woo-Sup Shim, Dong-Soo Kim, Dae-Ho Kwon, Joo-Deuk Kim, and Se-Jong Kim

487 A Role for Insulin-Like Growth Factor in the Regulation of IL-6-Responsive Human Myeloma Cell Line Growth
Diane F. Jelinek, Thomas E. Witzig, and Bonnie K. Arendt

497 Triggers of Autoimmune Disease in a Murine TCR-Transgenic Model for Multiple Sclerosis
Thea Brabb, Ananda W. Goldrath, Peter von Dassow, Angela Paez, H. Denny Liggitt, and Joan Goverman

508 Author Index

510 Information for Authors

514 Editorial Policies and Practices

517 Submission Form: Full Length Articles

518 AAI Membership Application

519 Submission Form: Cutting Edge

520 AAI Trainee Membership Application

521 CIS Membership Application

VOLUME 159 / Nº 2 / JULY 15, 1997

CUTTING EDGE

529 Concurrent or Sequential δ and β TCR Gene Rearrangement During Thymocyte Development: Individual Thymi Follow Distinct Pathways
David Margolis, Maryam Yassai, Anne Hletko, Laura McOlash, and Jack Gorski

534 Dexamethasone Potently Enhances Phorbol Ester-Induced IL-1β Gene Expression and Nuclear Factor NF-κB Activation
Yisheng Wang, J. J. Zhang, Wei Dai, K. Y. Lei, and J. Wesley Pike

538 Reconstitution of the Extrathymic Intestinal T Cell Compartment in the Absence of Irradiation
Leo Lefrançois and Sara Olson

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

543 Characterization of Transport of Newly Assembled, T Cell-Stimulatory MHC Class II-Peptide Complexes from MHC Class II Compartments to the Cell Surface
Leslie Pond and Colin Watts

554 The Generation of MHC Class I-Associated Peptides Is Only Partially Inhibited by Proteasome Inhibitors: Involvement of Nonproteasomal Cytosolic Proteases in Antigen Processing?
Alexander Vinitsky, Luis C. Antón, Heidi Link Snyder, Marian Orlowski, Jack R. Bennink, and Jonathan W. Yewdell

565 Dendritic Cell Subtypes in Mouse Lymphoid Organs: Cross-Correlation of Surface Markers, Changes with Incubation, and Differences Among Thymus, Spleen, and Lymph Nodes
David Vremec and Ken Shortman

574 Melatonin Enhances IL-2, IL-6, and IFN-γ Production by Human Circulating $CD4^+$ Cells: A Possible Nuclear Receptor-Mediated Mechanism Involving T Helper Type 1 Lymphocytes and Monocytes
Sofia Garcia-Mauriño, Maria G. Gonzalez-Haba, Juan R. Calvo, Mohammed Rafii-El-Idrissi, Victor Sanchez-Margalet, Raimundo Goberna, and Juan M. Guerrero

582 The Role of Protein Kinase C in $CD8^+$ T Lymphocyte Effector Responses
Dragana Nešić, Kanchan G. Jhaver, and Stanislav Vukmanović

591 Inflammatory Cytokines Enhance the In Vivo Clonal Expansion and Differentiation of Antigen-Activated $CD4^+$ T Cells
Kathryn A. Pape, Alexander Khoruts, Anna Mondino, and Marc K. Jenkins

599 Targeting of Natural Killer Cells to Mammary Carcinoma via Naturally Occurring Tumor Cell-Bound iC3b and β-Glucan-Primed CR3 (CD11b/CD18)
Vaclav Vetvicka, Brian P. Thornton, T. Jeffery Wieman, and Gordon D. Ross

606 Cytokine-Deficient $CD8^+$ Tc1 Cells Induced by IL-4: Retained Inflammation and Perforin and Fas Cytotoxicity but Compromised Long Term Killing of Tumor Cells
Subash Sad, Li Li, and Tim R. Mosmann

614 The 25-kDa Soluble CD23 Activates Type III Constitutive Nitric Oxide-Synthase Activity Via CD11b and CD11c Expressed by Human Monocytes
Jean-Pierre Aubry, Nathalie Dugas, Sybille Lecoanet-Henchoz, Fateh Ouaaz, Haixia Zhao, Jean-François Delfraissy, Pierre Graber, Jean-Pierre Kolb, Bernard Dugas, and Jean-Yves Bonnefoy

623 Compromised Allograft Rejection Response in Transgenic Mice Expressing Antisense Sequences to Retinoic Acid Receptor β_2
Huifang Chen, Jacques Bérard, Hongyu Luo, Miguel Landers, Bernard Vinet, W. Edward C. Bradley, and Jiangping Wu

635 Activation of Human Dendritic Cells Following Infection with *Mycobacterium tuberculosis*
Robert A. Henderson, Simon C. Watkins, and JoAnne L. Flynn

644 Induction of Tolerance to Human γ-Globulin in FcRγ- and FcγRII-Deficient Mice
Karen J. Whitmer, Carole G. Romball, and William O. Weigle

650 Migration and Activation of Antigen-Specific $CD8^+$ T Cells Upon In Vivo Stimulation with Allogeneic Tumor
Ross M. Kedl and Matthew F. Mescher

664 Type 1 Versus Type 2 Cytokine Release by Vβ T Cell Subpopulations Determines In Vivo Antitumor Reactivity: IL-10 Mediates a Suppressive Role
Atsushi Aruga, Etsuko Aruga, Keishi Tanigawa, D. Keith Bishop, Vernon K. Sondak, and Alfred E. Chang

674 Increased Lymphocyte Apoptosis in Fas Ligand Transgenic Mice
Jianhua Cheng, Changdan Liu, PingAr Yang, Tong Zhou, and John D. Mountz

685 Adenoviral Gene Delivery Elicits Distinct Pulmonary-Associated T Helper Cell Responses to the Vector and to Its Transgene
Frederik W. van Ginkel, Jerry R. McGhee, Chongguang Liu, Jerry W. Simecka, Masafumi Yamamoto, Raymond A. Frizzell, Eric J. Sorscher, Hiroshi Kiyono, and David W. Pascual

694 Fetal Liver Contains Committed NK Progenitors, but Is Not a Site for Development of $CD34^+$ Cells into T Cells
Ana Cristina Jaleco, Bianca Blom, Pieter Res, Kees Weijer, Lewis L. Lanier, Joseph H. Phillips, and Hergen Spits

MOLECULAR AND STRUCTURAL IMMUNOLOGY

703 Different Modes of Peptide Interaction Enable HLA-DQ and HLA-DR Molecules to Bind Diverse Peptide Repertoires
Laura Raddrizzani, Tiziana Sturniolo, Jeanmarie Guenot, Elisa Bono, Fabio Gallazzi, Zoltan A. Nagy, Francesco Sinigaglia, and Juergen Hammer

712 Structural Analysis of Human Antibodies to Proteinase 3 from Patients with Wegener Granulomatosis
Jean Sibilia, Kamel Benlagha, Philippe Vanhille, Pierre Ronco, Jean-Claude Brouet, and Xavier Mariette

720 A Cloned Chicken Lymphokine Homologous to Both Mammalian IL-2 and IL-15
Roy S. Sundick and Carla Gill-Dixon

726 Transgenic Expression of a Novel Thymic Epithelial Cell Antigen Stimulates Abberant Development of Thymocytes
Tamotsu Takeuchi, Makoto Kuro-o, Hitoshi Miyazawa, Yuji Ohtsuki, and Hiroshi Yamamoto

734 Evolution of Proteasome Subunits δ and LMP2: Complementary DNA Cloning and Linkage Analysis with MHC in Lower Vertebrates
Masaru Nonaka, Chisato Namikawa-Yamada, Makoto Sasaki, Luisa Salter-Cid, and Martin F. Flajnik

741 A New 12-Kilodalton Dimer Associated with Pre-TCR Complex and Clonotype-Independent CD3 Complex on Immature Thymocytes
Kan Takase, Keisuke Wakizaka, Harald von Boehmer, Ikuo Wada, Hideshige Moriya, and Takashi Saito

748 Deviated Overexpression of TCR-β, TCR-γ, CD4, and CD8 on Thymic Lymphomas Induced by 1-Propyl-1-Nitrosourea: Destruction of the Allelic Exclusion of TCR-β and Expression of Functional TCR-βγ Heterodimer on a Lymphoma, cFTL53
Miyuki Kinebuchi, Akihiro Matsuura, Toshiaki Ogiu, and Kokichi Kikuchi

757 Normal Junctional Diversification of Immune Receptors in p53-Deficient Mice
Chiyu Wang, Molly A. Bogue, David B. Roth, and Katheryn Meek

HOST DEFENSE

763 Human Colorectal Cancer (CRC) Antigen CO17-1A/GA733 Encoded by Adenovirus Inhibits Growth of Established CRC Cells in Mice
Weiping Li, Klara Berencsi, Saroj Basak, Rajasekharan Somasundaram, Robert P. Ricciardi, Eva Gönczöl, Jan Zaloudik, Alban Linnenbach, Haruhiko Maruyama, Pierre Miniou, and Dorothee Herlyn

770 Interleukin-10 Prevents Dendritic Cell Accumulation and Vaccination with Granulocyte-Macrophage Colony-Stimulating Factor Gene-Modified Tumor Cells
Zhihai Qin, Gabriele Noffz, Mariette Mohaupt, and Thomas Blankenstein

777 IL-4 Protects Against TNF-α-Mediated Cachexia and Death During Acute Schistosomiasis
Laura Rosa Brunet, Fred D. Finkelman, Allen W. Cheever, Manfred A. Kopf, and Edward J. Pearce

786 IL-2 and IL-12 Act in Synergy to Overcome Antigen-Specific T Cell Unresponsiveness in Mycobacterial Disease
Rolien de Jong, Anneke A. M. Janson, William R. Faber, Ben Naafs, and Tom H. M. Ottenhoff

794 Interferons Up-Regulate STAT1, STAT2, and IRF Family Transcription Factor Gene Expression in Human Peripheral Blood Mononuclear Cells and Macrophages
Anne Lehtonen, Sampsa Matikainen, and Ilkka Julkunen

804 Role of Adhesion Molecules of the Selectin-Carbohydrate Families in Antibody-Dependent Cell-Mediated Cytoxicity to Schistosome Targets
François Trottein, Sophie Nutten, Jean-Paul Papin, Christelle Leportier, Odile Poulain-Godefroy, André Capron, and Monique Capron

812 The CDK Inhibitor, $p27^{Kip1}$, Is Required for IL-4 Regulation of Astrocyte Proliferation
Jinbo Liu, W. Michael Flanagan, Judith A. Drazba, Melinda L. Estes, Gene H. Barnett, Talat Haqqi, Seiji Kondo, and Barbara P. Barna

INFLAMMATION

820 CD50 Monoclonal Antibodies Inhibit Neutrophil Activation
Keith M. Skubitz, Kenneth D. Campbell, and Amy P. N. Skubitz

829 Activation of Phosphatidylinositol 3′-Kinase by Insulin-Like Growth Factor-I Rescues Promyeloid Cells from Apoptosis and Permits Their Differentiation into Granulocytes
Qiang Liu, Dan Schacher, Charlotte Hurth, Gregory G. Freund, Robert Dantzer, and Keith W. Kelley

838 Recombinant Human Granulocyte-Macrophage Colony-Stimulating Factor (CSF), but Not Recombinant Human Granulocyte CSF, Down-Regulates the Recombinant Human Stem Cell Factor-Dependent Differentiation of Human Fetal Liver-Derived Mast Cells
Zhongmin Du, Yongli Li, Hanzhang Xia, Anne-Marie Irani, and Lawrence B. Schwartz

846 IL-4 and IL-10 Modulation of CD40-Mediated Signaling of Monocyte IL-1β Synthesis and Rescue from Apoptosis
Jonathan C. Poe, David H. Wagner, Jr., Robert W. Miller, Robert D. Stout, and Jill Suttles

853 The Role of γδ T Lymphocytes in Lipopolysaccharide-Induced Eosinophil Accumulation into the Mouse Pleural Cavity
Carmen Penido, Hugo C. Castro-Faria-Neto, Andrea P. Larangeira, Elaine C. Rosas, Ricardo Ribeiro-dos-Santos, Patrícia T. Bozza, and Maria das Graças M. O. Henriques

861 TNF-α-Mediated Expression of the Receptor for Anaphylatoxin C5a on Neurons in Experimental *Listeria* Meningoencephalitis
Philip F. Stahel, Karl Frei, Hans-Pietro Eugster, Adriano Fontana, Klaus M. Hummel, Rick A. Wetsel, Robert S. Ames, and Scott R. Barnum

870 Chemokine Expression in Experimental Tubulointerstitial Nephritis
Winson W. Tang, Meiying Qi, Jeffrey S. Warren, and Gwyneth Y. Van

877 STAT5 Involvement in the Differentiation Response of Primary Chicken Myeloid Progenitor Cells to Chicken Myelomonocytic Growth Factor
Irina Woldman, Georg Mellitzer, Matthias Kieslinger, Dieter Buchhart, Andreas Meinke, Hartmut Beug, and Thomas Decker

887 Stimulation of Fcγ Receptors in Rat Peritoneal Macrophages Induces the Expression of Nitric Oxide Synthase and Chemokines by Mechanisms Showing Different Sensitivities to Antioxidants and Nitric Oxide Donors
Yolanda Bayón, Andrés Alonso, and Mariano Sánchez Crespo

895 Suppressive Effects of Recombinant Human Monokine Induced by IFN-γ (rHuMig) Chemokine on the Number of Committed and Primitive Hemopoietic Progenitors in Liquid Cultures of $CD34^+$ Human Bone Marrow Cells
Gretchen N. Schwartz, Fang Liao, Ronald E. Gress, and Joshua M. Farber

905 Functional Expression of the CXC-Chemokine Receptor-4/Fusin on Mouse Microglial Cells and Astrocytes
Shigeyuki Tanabe, Michael Heesen, Izumi Yoshizawa, Michael A. Berman, Yi Luo, Conrad C. Bleul, Timothy A. Springer, Kenji Okuda, Norma Gerard, and Martin E. Dorf

912 Cytokine-Induced Neutrophil-Mediated Injury of Human Endothelial Cells
Johan Bratt and Jan Palmblad

919 CD44 Regulates Phagocytosis of Apoptotic Neutrophil Granulocytes, but Not Apoptotic Lymphocytes, by Human Macrophages
Simon P. Hart, Graeme J. Dougherty, Christopher Haslett, and Ian Dransfield

926 Roles of CD9 Molecules in Survival and Activation of Human Eosinophils
Jin-Tack Kim, Gerald J. Gleich, and Hirohito Kita

934 CD7-Mediated Regulation of Integrin Adhesiveness on Human T Cells Involves Tyrosine Phosphorylation-Dependent Activation of Phosphatidylinositol 3-Kinase
Anissa S. H. Chan, James L. Mobley, Gregg B. Fields, and Yoji Shimizu

943 Binding of Human Peripheral Blood Polymorphonuclear Leukocytes to E-Selectin (CD62E) Does Not Promote Their Activation
Heikki Repo, Yvan P. Rochon, Barbara R. Schwartz, Sam R. Sharar, Robert K. Winn, and John M. Harlan

952 Ligation of L-Selectin Through Conserved Regions Within the Lectin Domain Activates Signal Transduction Pathways and Integrin Function in Human, Mouse, and Rat Leukocytes
Douglas A. Steeber, Pablo Engel, Ann S. Miller, Michael P. Sheetz, and Thomas F. Tedder

964 Effect of an Ectokinase Inhibitor, K252b, on Degranulation and Ca^{2+} Signals of RBL-2H3 Cells and Human Basophils
Reiko Teshima, Yoshiro Saito, Hideharu Ikebuchi, Nilhan Rajiva De Silva, Yutaka Morita, Mamoru Nakanishi, Jun-ichi Sawada, and Seiichi Kitani

970 Endotoxin Shock in Antibody-Deficient Mice: Unraveling the Role of Natural Antibody and Complement in the Clearance of Lipopolysaccharide
Russell R. Reid, Andrey P. Prodeus, Wasif Khan, Tom Hsu, Fred S. Rosen, and Michael C. Carroll

976 Increased Susceptibility to Endotoxin Shock in Complement C3- and C4-Deficient Mice Is Corrected by C1 Inhibitor Replacement
Michael B. Fischer, Andrey P. Prodeus, Anne Nicholson-Weller, Minghe Ma, Jonathan Murrow, Russell R. Reid, Henry B. Warren, Arthur L. Lage, Francis D. Moore, Jr., Fred S. Rosen, and Michael C. Carroll

983 Role of the P2 Residue of Complement 1 Inhibitor (Ala^{443}) in Determination of Target Protease Specificity: Inhibition of Complement and Contact System Proteases
Rana Zahedi, Jeffrey Wisnieski, and Alvin E. Davis III

CLINICAL IMMUNOLOGY

990 Myeloid Differentiation Treatment to Diminish the Presence of Immune-Suppressive $CD34^+$ Cells Within Human Head and Neck Squamous Cell Carcinomas
M. Rita I. Young, Mark A. Wright, and Rajiv Pandit

997 Involvement of Laminin and Its Receptor in Abrogation of Heart Graft Rejection by Autoreactive T Cells from *Trypanosoma cruzi*-Infected Mice
Suse Dayse Silva-Barbosa, Vinicius Cotta-de-Almeida, Ingo Riederer, Juliana De Meis, Mireille Dardenne, Adriana Bonomo, and Wilson Savino

1004 Genetic Susceptibility to Experimental Autoimmune Uveitis Involves More than a Predisposition to Generate a T Helper-1-Like or a T Helper-2-Like Response
Bing Sun, Luiz V. Rizzo, Shu-Hui Sun, Chi-Chao Chan, Barbara Wiggert, Ronald L. Wilder, and Rachel R. Caspi

1012 CD30 Induction and Cytokine Profiles in Hepatitis C Virus Core-Specific Peripheral Blood T Lymphocytes
Rainer P. Woitas, Martin Lechmann, Günther Jung, Rolf Kaiser, Tilman Sauerbruch, and Ulrich Spengler

1019 Molecular Bases of C7 Deficiency: Three Different Defects
Barbara A. Fernie, Ann Orren, Gerard Sheehan, Menachem Schlesinger, and Michael J. Hobart

1027 B Cell Genotype Determines the Fine Specificity of Autoantibody in *lpr* Mice
Vellalore N. Kakkanaiah, Eric S. Sobel, Glen C. MacDonald, Robert L. Cheek, Philip L. Cohen, and Robert A. Eisenberg

1036 Induction of Antigen-Specific Tolerance for the Treatment of Ongoing, Relapsing Autoimmune Encephalomyelitis: A Comparison Between Oral and Peripheral Tolerance
Kevin J. Kennedy, Wendy S. Smith, Stephen D. Miller, and William J. Karpus

1045 Author Index

VOLUME 159 / Nº 3 / AUGUST 1, 1997

CUTTING EDGE

1055 Commentary: Do Effector and Memory T Helper Cells Also Need B7 Ligand Costimulatory Signals?
William C. Gause, Velia Mitro, Charles Via, Peter Linsley, Joseph F. Urban, Jr., and Rebecca J. Greenwald

1059 Inhibition of Acute Peritoneal Inflammation in Rats by a Cytokine-Induced Neutrophil Chemoattractant Receptor Antagonist
John Zagorski and Sharon M. Wahl

1063 Microtubule Retraction into the Uropod and Its Role in T Cell Polarization and Motility
Stuart Ratner, Wilbert S. Sherrod, and Darcy Lichlyter

1068 Telomerase Is Up-Regulated in Human Germinal Center B Cells In Vivo and Can Be Re-expressed in Memory B Cells Activated In Vitro
Branda T. Hu, Sang C. Lee, Elides Marin, Daniel H. Ryan, and Richard A. Insel

1072 CD94/NKG2 Is the Predominant Inhibitory Receptor Involved in Recognition of HLA-G by Decidual and Peripheral Blood NK Cells
Kalle Söderström, Brian Corliss, Lewis L. Lanier, and Joseph H. Phillips

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

1077 B Cell Responses to a Peptide Epitope : III. Differential T Helper Cell Thresholds in Recruitment of B Cell Fine Specificities
Anshu Agarwal and Kanury V. S. Rao

1086 Correction of Defective Expression in MHC Class II Deficiency (Bare Lymphocyte Syndrome) Cells by Retroviral Transduction of *CIITA*
M. Brigid Bradley, Jose M. Fernandez, Grace Ungers, Teresa Diaz-Barrientos, Viktor Steimle, Bernard Mach, Richard O'Reilly, and Janet S. Lee

1096 Cross-Linking of the IgM Receptor Induces Rapid Translocation of IgM-Associated Ig α, Lyn, and Syk Tyrosine Kinases to the Membrane Skeleton
Lisa Sava Jgloff and Jenny Jongstra-Bilen

1107 Differential Association of Phosphatidylinositol 3-Kinase with Insulin Receptor Substrate (IRS)-1 and IRS-2 in Human Thymocytes in Response to IL-7
Nigel Sharfe and Chaim M. Roifman

1115 Ligation of the V7 Molecule on T Cells Blocks Anergy Induction Through a CD28-Independent Mechanism
Luis R. B. Soares, Alberto Rivas, Larisa Tsavaler, and Edgar G. Engleman

1125 High Affinity Rheumatoid Factor Transgenic B Cells Are Eliminated in Normal Mice
Haowei Wang and Mark J. Shlomchik

1135 ZAP-70 Tyrosine Kinase Is Required for the Up-Regulation of Fas Ligand in Activation-Induced T Cell Apoptosis
Christine M. Eischen, Brandi L. Williams, Weiguo Zhang, Lawrence E. Samelson, David H. Lynch, Robert T. Abraham, and Paul J. Leibson

1140 A Novel Human CC Chemokine PARC That Is Most Homologous to Macrophage-Inflammatory Protein-1α/LD78α and Chemotactic for T Lymphocytes, but Not for Monocytes
Kunio Hieshima, Toshio Imai, Masataka Baba, Kiyomitsu Shoudai, Koko Ishizuka, Takenobu Nakagawa, Jyunji Tsuruta, Motohiro Takeya, Yoshiyuki Sakaki, Kiyoshi Takatsuki, Retsu Miura, Ghislain Opdenakker, Jo Van Damme, Osamu Yoshie, and Hisayuki Nomiyama

1150 The Effects of IFN-γ on CD40-Mediated Activation of B Cells from X-Linked Immunodeficient or Normal Mice
Caroline Johnson-Léger, Jagvharal Hasbold, Mary Holman, and Gerry G. B. Klaus

1160 Selective Loss of the Calcium Ion Signaling Pathway in T Cells Maturing Toward a T Helper 2 Phenotype
Joanne Sloan-Lancaster, Thomas H. Steinberg, and Paul M. Allen

1169 The Role of Donor and Recipient B7-1 (CD80) in Allograft Rejection
Xiu Xiao Zheng, Mohamed H. Sayegh, Xiang-Guang Zheng, Yongsheng Li, Peter S. Linsley, Robert Peach, Frank Borriello, Terry B. Strom, Arlene H. Sharpe, and Laurence A. Turka

1174 Ontogeny of Thymic NK1.1$^+$ Cells
Zuhair K. Ballas, Wendy L. Rasmussen, Carol A. Alber, and Matyas Sandor

1182 Activated T Cells from Draining Lymph Nodes and an Effector Site Differ in Their Responses to TCR Stimulation
Nicole Baumgarth, Mark Egerton, and Anne Kelso

1192 Viral Regulation of CD95 Expression and Apoptosis in T Lymphocytes
Scott Sieg, Yung Huang, and David Kaplan

1200 Involvement of Protein Tyrosine Kinase p72^{syk} and Phosphatidylinositol 3-Kinase in CD2-Mediated Granular Exocytosis in the Natural Killer Cell Line, NK3.3
Hisanori Umehara, Jian-Yong Huang, Takeshi Kono, Fazal H. Tabassam, Toshiro Okazaki, Eda T. Bloom, and Naochika Domae

1208 Neutralizing IL-12 During Induction of Murine Acute Graft-Versus-Host Disease Polarizes the Cytokine Profile Toward a Th2-Type Alloimmune Response and Confers Long Term Protection From Disease
Eilidh Williamson, Paul Garside, J. Andrew Bradley, Ian A. R. More, and Allan McI. Mowat

1216 Mouse CD1 Is Mainly Expressed on Hemopoietic-Derived Cells
Laurent Brossay, Denis Jullien, Susanna Cardell, Beate C. Sydora, Nicolas Burdin, Robert L. Modlin, and Mitchell Kronenberg

1225 IL-4 and Insulin-Like Growth Factor-I Inhibit the Decline in Bcl-2 and Promote the Survival of IL-3-Deprived Myeloid Progenitors
Christian Minshall, Sean Arkins, James Straza, James Conners, Robert Dantzer, Gregory G. Freund, and Keith W. Kelley

1233 A Functional B Cell Receptor Transgene Allows Efficient IL-7-Independent Maturation of B Cell Precursors
Doron Melamed, Jennifer A. Kench, Kenneth Grabstein, Antonius Rolink, and David Nemazee

MOLECULAR AND STRUCTURAL IMMUNOLOGY

1240 Distinct Methylation States of the CD8β Gene in Peripheral T Cells and Intraepithelial Lymphocytes
Jessica A. Hamerman, Stephanie T. Page, and Ann M. Pullen

1247 Family-Specific Differences in Transcription Efficiency of Ig Heavy Chain Promoters
Kent L. Buchanan, Elizabeth A. Smith, Shenshen Dou, Lynn M. Corcoran, and Carol F. Webb

1255 Identification of a STAT6 Domain Required for IL-4-Induced Activation of Transcription
Binfeng Lu, Martin Reichel, Douglas A. Fisher, James F. Smith, and Paul Rothman

1265 A Truncated Heavy Chain Protein Relieves the Requirement for Surrogate Light Chains in Early B Cell Development
A. L. Shaffer and Mark S. Schlissel

1276 *RP1*, a New Member of the Adenomatous Polyposis Coli-Binding *EB1*-Like Gene Family, Is Differentially Expressed in Activated T Cells
Christoph Renner, Jan-Peter Pfitzenmeier, Klaus Gerlach, Gerhard Held, Sascha Ohnesorge, Ugur Sahin, Stefan Bauer, and Michael Pfreundschuh

1284 In Vivo Footprinting and Mutational Analysis of the Proximal CD19 Promoter Reveal Important Roles for an SP1/Egr-1 Binding Site and a Novel Site Termed the PyG Box
Agostino Riva, Gaye Lynn Wilson, and John H. Kehrl

1293 Somatic Mutation in V_H Complementarity-Determining Region 2 and Framework Region 2: Differential Effects on Antigen Binding and Ig Secretion
Gregory D. Wiens, Kurt A. Heldwein, Mary P. Stenzel-Poore, and Marvin B. Rittenberg

1303 Effect of Mitogenic Stimulation and DNA Methylation on Human T Cell DNA Methyltransferase Expression and Activity
Jun Yang, Chun Deng, Nahid Hemati, Samir M. Hanash, and Bruce C. Richardson

1310 Virtually Identical Enhancers Containing a Segment of Homology to Murine 3′IgH-E(hs1,2) Lie Downstream of Human Ig Cα1 and Cα2 Genes
Chaoqun Chen and Barbara K. Birshtein

1319 Involvement of Rel, Fos, and Jun Proteins in Binding Activity to the IL-2 Promoter CD28 Response Element/AP-1 Sequence in Human T Cells
Kathleen L. McGuire and Milena Iacobelli

HOST DEFENSE

1328 Single-Cell Cytokine Analysis of γδ T Cell Responses to Nonpeptide Mycobacterial Antigens
Verónica E. García, Peter A. Sieling, JianHua Gong, Peter F. Barnes, Koichi Uyemura, Yoshi Tanaka, Barry R. Bloom, Craig T. Morita, and Robert L. Modlin

1336 Peptides Derived From a Wild-Type Murine Proto-Oncogene c-*erb*B-2/HER2/*neu* Can Induce CTL and Tumor Suppression in Syngeneic Hosts
Yasuhiro Nagata, Reiko Furugen, Atsunori Hiasa, Hiroaki Ikeda, Nobuyoshi Ohta, Keiko Furukawa, Hideo Nakamura, Koichi Furukawa, Takashi Kanematsu, and Hiroshi Shiku

1344 Lipopolysaccharide-Induced IL-12 Expression in the Central Nervous System and Cultured Astrocytes and Microglia
Anna K. Stalder, Axel Pagenstecher, Nai Chen Yu, Carrie Kincaid, Chi-Shiun Chiang, Monte V. Hobbs, Floyd E. Bloom, and Iain L. Campbell

1352 Differential Induction of Apoptosis by Virulent *Mycobacterium tuberculosis* in Resistant and Susceptible Murine Macrophages: Role of Nitric Oxide and Mycobacterial Products
Mauricio Rojas, Luis F. Barrera, Germain Puzo, and Luis F. Garcia

1362 Binding of Malaria T Cell Epitopes to DR and DQ Molecules In Vitro Correlates with Immunogenicity In Vivo: Identification of a Universal T Cell Epitope in the *Plasmodium falciparum* Circumsporozoite Protein
J. Mauricio Calvo-Calle, Juergen Hammer, Francesco Sinigaglia, Pedro Clavijo, Z. Rosa Moya-Castro, and Elizabeth H. Nardin

1374 Immunodominance of a Single CTL Epitope in a Primate Species with Limited MHC Class I Polymorphism
David T. Evans, Marian S. Piekarczyk, Todd M. Allen, Jonathan E. Boyson, Meredith Yeager, Austin L. Hughes, Frances M. Gotch, Virginia S. Hinshaw, and David I. Watkins

1383 The Hepatitis B Virus-Specific CTL Responses Induced in Humans by Lipopeptide Vaccination Are Comparable to Those Elicited by Acute Viral Infection
Brian D. Livingston, Claire Crimi, Hilda Grey, Glenn Ishioka, Francis V. Chisari, John Fikes, Howard Grey, Robert W. Chesnut, and Alessandro Sette

1393 Time-Dependent Induction of Protective Anti-Influenza Immune Responses in Human Peripheral Blood Lymphocyte/SCID Mice
Shelley E. Albert, Colin McKerlie, Andrew Pester, Betty-Jo Edgell, James Carlyle, Martin Petric, and John W. Chamberlain

INFLAMMATION

1404 Identification of an Inhibitor Targeting Macrophage Production of Monocyte Chemoattractant Protein-1 as TGF-β_1
Masanori Kitamura

1412 Increased Tolerance to Endotoxin by Granulocyte-Macrophage Colony-Stimulating Factor-Deficient Mice
Sunanda Basu, Ashley R. Dunn, Michael W. Marino, Helen Savoia, George Hodgson, Graham J. Lieschke, and Jonathan Cebon

1418 Suppression of Concanavalin A-Induced Hepatitis in IFN-$\gamma^{-/-}$ Mice, but Not in TNF-$\alpha^{-/-}$ Mice: Role for IFN-γ in Activating Apoptosis of Hepatocytes
Yoh-ichi Tagawa, Kenji Sekikawa, and Yoichiro Iwakura

1429 Evidence That the Two C1q Binding Membrane Proteins, gC1q-R and cC1q-R, Associate to Form a Complex
Berhane Ghebrehiwet, Phoebe D. Lu, Weibing Zhang, Sue A. Keilbaugh, Leonora E. A. Leigh, Paul Eggleton, Kenneth B. M. Reid, and Ellinor I. B. Peerschke

1437 The CXC Chemokines, IL-8 and IP-10, Regulate Angiogenic Activity in Idiopathic Pulmonary Fibrosis
Michael P. Keane, Douglas A. Arenberg, Joseph P. Lynch III, Richard I. Whyte, Mark D. Iannettoni, Marie D. Burdick, Carol A. Wilke, Susan B. Morris, Mary C. Glass, Bruno DiGiovine, Steven L. Kunkel, and Robert M. Strieter

1444 Nitric Oxide Inhibits IgE-Mediated Degranulation of Mast Cells and Is the Principal Intermediate in IFN-γ-Induced Suppression of Exocytosis
Nigel C. Eastmond, Emma M. S. Banks, and John W. Coleman

1451 Extracellular ATP Triggers IL-1β Release by Activating the Purinergic P2Z Receptor of Human Macrophages
Davide Ferrari, Paola Chiozzi, Simonetta Falzoni, Monica Dal Susino, Loredana Melchiorri, Olavio R. Baricordi, and Francesco Di Virgilio

1459 Differential Effects of the T Helper Cell Type 2-Derived Cytokines IL-4 and IL-5 on Ligand Binding to IgG and IgA Receptors Expressed by Human Eosinophils
Madelon Bracke, Gerald R. Dubois, Klaas Bolt, Piet L. B. Bruijnzeel, Jean-Pierre Vaerman, Jan-Willem J. Lammers, and Leo Koenderman

1466 Eotaxin-Induced Eosinophil Migration in the Peritoneal Cavity of Ovalbumin-Sensitized Mice: Mechanism of Action
Anuk M. Das, Roderick J. Flower, and Mauro Perretti

1474 Soluble IL-6 Receptor Leads to a Paracrine Modulation of the IL-6-Induced Hepatic Acute Phase Response in Double Transgenic Mice
Malte Peters, Margarete Odenthal, Peter Schirmacher, Manfred Blessing, Elena Fattori, Gennaro Ciliberto, Karl-Hermann Meyer zum Büschenfelde, and Stefan Rose-John

1482 Recombinant Guinea Pig and Human RANTES Activate Macrophages but Not Eosinophils in the Guinea Pig
Emma M. Campbell, Amanda E. I. Proudfoot, Teizo Yoshimura, Bernard Allet, Timothy N. C. Wells, Anna-Marie White, John Westwick, and Malcolm L. Watson

1490 In Vivo IL-12 Administration Induces Profound but Transient Commitment to T Helper Cell Type 1-Associated Patterns of Cytokine and Antibody Production
Julia D. Rempel, MingDong Wang, and Kent T. HayGlass

1497 Structure-Function Analysis of the Integrin β_7 Subunit: Identification of Domains Involved in Adhesion to MAdCAM-1
Mark Tidswell, Russell Pachynski, Steve W. Wu, Shi-Qiang Qiu, Elizabeth Dunham, Nancy Cochran, Michael J. Briskin, Peter J. Kilshaw, Andrew I. Lazarovits, David P. Andrew, Eugene C. Butcher, Ted A. Yednock, and David J. Erle

CLINICAL IMMUNOLOGY

1508 Expression of an Anti-DNA-Associated V_H Gene in Immunized and Autoimmune Mice
Ana Ash-Lerner, Merav Ginsberg-Strauss, Yael Pewzner-Jung, Dharmesh D. Desai, Tony N. Marion, and Dan Eilat

1520 Differential Expression of Cyclic Nucleotide Phosphodiesterase 3 and 4 Activities in Human T Cell Clones Specific for Myelin Basic Protein
Dag Ekholm, Bernhard Hemmer, Guang Gao, Marco Vergelli, Roland Martin, and Vincent Manganiello

1530 Characterization of Thyroglobulin-Directed and Polyreactive Catalytic Antibodies in Autoimmune Disease
Sudhir Paul, Lan Li, Ravishankar Kalaga, James O'Dell, Robert E. Dannenbring, Jr., Susan Swindells, Steven Hinrichs, Patrizio Caturegli, and Noel R. Rose

1537 Requirement of IL-4 and Liver $NK1^+$ T Cells for Concanavalin A-Induced Hepatic Injury in Mice
Shinichi Toyabe, Shuhji Seki, Tsuneo Iiai, Kazuyoshi Takeda, Katsuaki Shirai, Hisami Watanabe, Hoshio Hiraide, Makoto Uchiyama, and Toru Abo

1543 Bispecific Humanized Anti-IL-2 Receptor $\alpha\beta$ Antibodies Inhibitory for Both IL-2- and IL-15-Mediated Proliferation
Robert S. Pilson, Wayne Levin, Bhupesh Desai, Linda M. Reik, Ping Lin, Elcin Korkmaz-Duffy, Elaine Campbell, J. Yun Tso, Jo A. Kerwin, and John Hakimi

1557 Mouse Complement Receptors Type 1 (CR1; CD35) and Type 2 (CR2; CD21): Expression on Normal B Cell Subpopulations and Decreased Levels During the Development of Autoimmunity in MRL/*lpr* Mice
Kazuko Takahashi, Yuko Kozono, Thomas J. Waldschmidt, Dawn Berthiaume, Richard J. Quigg, Anna Baron, and V. Michael Holers

1570 A 17-Mer Self-Peptide of Acetylcholine Receptor Binds to B Cell MHC Class II, Activates Helper T Cells, and Stimulates Autoantibody Production and Electrophysiologic Signs of Myasthenia Gravis
Hiroaki Yoshikawa, Edward H. Lambert, Debby R. Walser-Kuntz, Yoshihiro Yasukawa, Daniel J. McCormick, and Vanda A. Lennon

1578 Author Index

VOLUME 159 / Nº 4 / AUGUST 15, 1997

CUTTING EDGE

1585 Lactate Dehydrogenase-Elevating Virus (LDV): Lifelong Coexistence of Virus and LDV-Specific Immunity
Maries F. van den Broek, Roman Spörri, Chen Even, Peter G. W. Plagemann, Edgar Hänseler, Hans Hengartner, and Rolf M. Zinkernagel

1589 Identification and Characterization of a Novel β Chemokine Containing Six Conserved Cysteines
Joseph A. Hedrick and Albert Zlotnik

1594 Human Monocytic Cells Contain High Levels of Intracellular Fas Ligand: Rapid Release Following Cellular Activation
Peter A. Kiener, Patricia M. Davis, Bruce M. Rankin, Seymour J. Klebanoff, Jeffrey A. Ledbetter, Gary C. Starling, and W. Conrad Liles

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

1599 IL-4 Expression by Grafts from Transgenic Mice Fails to Prevent Allograft Rejection
Regula Mueller, Joanna D. Davies, Troy Krahl, and Nora Sarvetnick

1604 IL-12 Production by Central Nervous System Microglia Is Inhibited by Astrocytes
Francesca Aloisi, Giuseppe Penna, Joanna Cerase, Begoña Menéndez Iglesias, and Luciano Adorini

1613 Cot Kinase Regulation of IL-2 Production in Jurkat T Cells
Alicia Ballester, Rafael Tobeña, Carlos Lisbona, Victor Calvo, and Susana Alemany

1619 Modulation of Lymphocyte Interaction with Endothelium and Homing by HIV-1 gp120
Manuela Bragardo, Donatella Buonfiglio, Maria Josè Feito, Sara Bonissoni, Valter Redoglia, Josè Maria Rojo, Sara Ballester, Pilar Portoles, Giovanni Garbarino, Fabio Malavasi, and Umberto Dianzani

1628 Ion Channels, Ca^{2+} Signaling, and Reporter Gene Expression in Antigen-Specific Mouse T Cells
Hubert H. Kerschbaum, Paul A. Negulescu, and Michael D. Cahalan

1639 Three Domains of SLP-76 Are Required for Its Optimal Function in a T Cell Line
Michael A. Musci, David G. Motto, Susan E. Ross, Nan Fang, and Gary A. Koretzky

1648 Degenerate and Promiscuous Recognition by CTL of Peptides Presented by the MHC Class I A3-like Superfamily: Implications for Vaccine Development
Stephen C. Threlkeld, Peggy A. Wentworth, Spyros A. Kalams, Barbara M. Wilkes, Debbie J. Ruhl, Elissa Keogh, John Sidney, Scott Southwood, Bruce D. Walker, and Alessandro Sette

1658 Characterization of IL-12 Receptor β1 Chain (IL-12Rβ1)-Deficient Mice: IL-12Rβ1 Is an Essential Component of the Functional Mouse IL-12 Receptor
Chang-you Wu, Jessica Ferrante, Maurice K. Gately, and Jeanne Magram

1666 Introduction of Soluble Proteins into the MHC Class I Pathway by Conjugation to an HIV *tat* Peptide
Dewey T. Kim, Dennis J. Mitchell, Dirk G. Brockstedt, Lawrence Fong, Garry P. Nolan, C. Garrison Fathman, Edgar G. Engleman, and Jonathan B. Rothbard

1669 Weak Peptide Agonists Reveal Functional Differences in B7-1 and B7-2 Costimulation of Human T Cell Clones
David E. Anderson, Lara J. Ausubel, Jeff Krieger, Per Höllsberg, Gordon J. Freeman, and David A. Hafler

1676 Augmentation of Mature $CD4^+$ T Cell Responses to Isolated Antigenic Class II Proteins by Fibronectin and Intercellular Adhesion Molecule-1
Anders Brunmark and Anne M. O'Rourke

1686 Mechanisms of L-Selectin Regulation by Activated T Cells
Cheng-Chi Chao, Robert Jensen, and Morris O. Dailey

1695 The Avian chB6 (Bu-1) Alloantigen Can Mediate Rapid Cell Death
Phillip E. Funk, Clive A. Tregaskes, John R. Young, and Craig B. Thompson

1703 Peptide Antigen or Superantigen-Induced Down-Regulation of TCRs Involves Both Stimulated and Unstimulated Receptors
Florence Niedergang, Alice Dautry-Varsat, and Andrés Alcover

1711 CD28-B7 T Cell Costimulatory Blockade by CTLA4Ig in Sensitized Rat Recipients: Induction of Transplantation Tolerance in Association with Depressed Cell-Mediated and Humoral Immune Responses
Kazuhiko Onodera, Anil Chandraker, Meike Schaub, Thomas H. W. Stadlbauer, Stephan Korom, Robert Peach, Peter S. Linsley, Mohamed H. Sayegh, and Jerzy W. Kupiec-Weglinski

1718 Recombinant Soluble $\alpha\beta$ T Cell Receptors Protect T Cells from Immune Suppression: Requirement for Aggregated Multimeric, Disulfide-Linked $\alpha\beta$ Heterodimers
Vipin Paliwal, Wlodzimierz Ptak, Johann Sp[illegible]l, Emory Braswell, and Philip W. Askenase

1728 A Solution to the Rheumatoid Factor Paradox: Pathologic Rheumatoid Factors Can Be Tolerized by Competition with Natural Rheumatoid Factors
Jeffrey J. Stewart, Harvey Agosto, Samuel Litwin, J. Douglas Welsh, Mark Shlomchik, Martin Weigert, and Philip E. Seiden

1739 The Requirement of Intestinal Bacterial Flora for the Development of an IgE Production System Fully Susceptible to Oral Tolerance Induction
Nobuyuki Sudo, Sada-aki Sawamura, Kazuo Tanaka, Yuhji Aiba, Chiharu Kubo, and Yasuhiro Koga

1746 Homing of Naive and Memory T Lymphocyte Subsets to Peyer's Patches, Lymph Nodes, and Spleen
Marna B. Williams and Eugene C. Butcher

1753 T Cell Receptor Engagement Induces Tyrosine Phosphorylation of FAK and Pyk2 and their Association with Lck
Nancy N. Berg and Hanne L. Ostergaard

1758 T Cell Antigen Receptor-Induced IL-2 Production and Apoptosis Have Different Requirements for Lck Activities
Chan D. Chung, Linda A. Lewis, and M. Carrie Miceli

1767 T Cell Genetic Background Determines Maintenance of IL-12 Signaling: Effects on BALB/c and B10.D2 T Helper Cell Type 1 Phenotype Development
Mehmet L. Güler, Nils G. Jacobson, Ueli Gubler, and Kenneth M. Murphy

1775 TCR Expression in Human Fetal Intestine and Identification of an Early T Cell Receptor β-Chain Transcript
Jacob C. Koningsberger, Andreas Chott, Ton Logtenberg, Lucietta J. J. M. Wiegman, Richard S. Blumberg, Gerard P. van Berge Henegouwen, and Steven P. Balk

1783 Induction of Germinal Center B Cell Markers In Vitro by Activated $CD4^+$ T Lymphocytes: The Role of CD40 Ligand, Soluble Factors, and B Cell Antigen Receptor Cross-Linking
Garet P. Lahvis and Jan Cerny

1794 Self $\gamma 2a^b$ Protein Is Presented In Vivo by $\gamma 2a^b$ B Cells but Not by Dendritic Cells
Francesca Granucci, Maria Foti, Andrea Cossarizza, and Paola Ricciardi-Castagnoli

MOLECULAR AND STRUCTURAL IMMUNOLOGY

1800 Differential Interaction of Nuclear Factors with the Leukocyte-Specific pp52 Promoter in B and T cells
Sidne A. Omori, Stephen Smale, Anne O'Shea-Greenfield, and Randolph Wall

1809 B Cell Responses to a Peptide Epitope: IV. Subtle Sequence Changes in Flanking Residues Modulate Immunogenicity
Lalitha Vijayakrishnan, Surojit Sarkar, Rajendra P. Roy, and Kanury V.S. Rao

HOST DEFENSE

1820 *Salmonella typhimurium* Infections in Mice Deficient in Interleukin-4 Production: Role of IL-4 in Infection-Associated Pathology
Paul Everest, Jenny Allen, Anastasia Papakonstantinopoulou, Pietro Mastroeni, Mark Roberts, and Gordon Dougan

1828 Presentation Via the Class I Pathway by *Leishmania amazonensis*-Infected Macrophages of an Endogenous Leishmanial Antigen to $CD8^+$ T Cells
Peter E. Kima, Nancy H. Ruddle, and Diane McMahon-Pratt

1835 Congenic Mapping of the Insulin-Dependent Diabetes (*Idd*) Gene, *Idd10*, Localizes Two Genes Mediating the *Idd10* Effect and Eliminates the Candidate *Fcgr1*
Patricia L. Podolin, Paul Denny, Christopher J. Lord, Natasha J. Hill, John A. Todd, Laurence B. Peterson, Linda S. Wicker, and Paul A. Lyons

1844 Cytotoxic $CD8^+$ T Cells Recognize EBV Antigen but Poorly Kill Autologous EBV-Infected B Lymphoblasts: Immunodominance Is Elicited by a Peptide Epitope That Is Presented at Low Levels In Vitro
Yan Shi, Kelly D. Smith, Michael G. Kurilla, and Charles T. Lutz

1853 *Yersinia* Invasin, a Bacterial β_1-Integrin Ligand, Is a Potent Inducer of Lymphocyte Motility and Migration to Collagen Type IV and Fibronectin
Ignacio Arencibia, Nivia Carballeira Suárez, Hans Wolf-Watz, and Karl-Gösta Sundqvist

1860 Biologic Activity of Proteoglycan Macrophage Colony-Stimulating Factor
Shinya Suzu, Fumihiko Kimura, Jun Ota, Kazuo Motoyoshi, Takehito Itoh, Yuji Mishima, Muneo Yamada, and Seiichi Shimamura

1868 FcεRI-Deficient Mice Infected with *Schistosoma mansoni* Mount Normal Th2-Type Responses While Displaying Enhanced Liver Pathology
Dragana Jankovic, Marika C. Kullberg, David Dombrowicz, Susan Barbieri, Patricia Caspar, Thomas A. Wynn, William E. Paul, Allen W. Cheever, Jean-Pierre Kinet, and Alan Sher

1876 Virus Dissemination Through the Brain Parenchyma Without Immunologic Control
Philip G. Stevenson, Samantha Freeman, Charles R. M. Bangham, and Simon Hawke

1885 DNA Vaccines Against Lymphoma: Promotion of Anti-Idiotypic Antibody Responses Induced by Single Chain Fv Genes by Fusion to Tetanus Toxin Fragment C
Myfanwy B. Spellerberg, Delin Zhu, Andrew Thompsett, Catherine A. King, Terry J. Hamblin, and Freda K. Stevenson

1893 Matching Antibody Class with Pathogen Type and Portal of Entry: Cognate Mechanisms Regulate Local Isotype Expression Patterns in Lymph Nodes Draining the Respiratory Tract of Mice Inoculated with Respiratory Viruses, According to Virus Replication Competence and Site of Inoculation
Mark Y. Sangster, X. Yanie Mo, Robert Sealy, and Christopher Coleclough

1903 Perforin-Mediated Cytolysis Plays a Limited Role in Host Resistance to *Toxoplasma gondii*
Eric Y. Denkers, George Yap, Tanya Scharton-Kersten, Hugues Charest, Barbara A. Butcher, Patricia Caspar, Sara Heiny, and Alan Sher

INFLAMMATION

1909 Human Endothelial Cell Activation and Mediator Release in Response to the Bacterial Exotoxins *Escherichia coli* Hemolysin and Staphylococcal α-Toxin
Friedrich Grimminger, Frank Rose, Ulf Sibelius, Matthias Meinhardt, Bernd Pötzsch, Reiner Spriestersbach, Sucharit Bhakdi, Norbert Suttorp, and Werner Seeger

1917 Expression of Leukocyte Fucosyltransferases Regulates Binding to E-Selectin: Relationship to Previously Implicated Carbohydrate Epitopes
Amy J. Wagers, Lloyd M. Stoolman, Reiji Kannagi, Ron Craig, and Geoffrey S. Kansas

1930 Human Dermal Microvascular Endothelial Cells Express the Melanocortin Receptor Type 1 and Produce Increased Levels of IL-8 upon Stimulation with α-Melanocyte-Stimulating Hormone
Mechthild Hartmeyer, Thomas Scholzen, Eva Becher, Ranjit S. Bhardwaj, Thomas Schwarz, and Thomas A. Luger

1938 Induction of Ceruloplasmin Synthesis by IFN-γ in Human Monocytic Cells
Barsanjit Mazumder, Chinmay K. Mukhopadhyay, Alan Prok, Martha K. Cathcart, and Paul L. Fox

1945 Suppression of Ongoing Ocular Inflammatory Disease by Topical Administration of Plasmid DNA Encoding IL-10
Massoud Daheshia, Nelly Kuklin, Sivadasan Kanangat, Elanchezhiyan Manickan, and Barry T. Rouse

1953 Potentiation of C1 Inhibitor by Glycosaminoglycans: Dextran Sulfate Species Are Effective Inhibitors of In Vitro Complement Activation in Plasma
Walter A. Wuillemin, Henk te Velthuis, Yvonne T. P. Lubbers, Cornelis P. de Ruig, Eric Eldering, and C. Erik Hack

1961 Thrombopoietin Promotes Adhesion of Primitive Human Hemopoietic Cells to Fibronectin and Vascular Cell Adhesion Molecule-1: Role of Activation of Very Late Antigen (VLA)-4 and VLA-5
Li Cui, Veslemøy Ramsfjell, Ole J. Borge, Ole P. Veiby, Si Lok, and Sten E. W. Jacobsen

1970 *Listeria monocytogenes* Potently Induces Up-Regulation of Endothelial Adhesion Molecules and Neutrophil Adhesion to Cultured Human Endothelial Cells
Matthias Krüll, Ralph Nöst, Stefan Hippenstiel, Eugen Domann, Trinad Chakraborty, and Norbert Suttorp

1977 P- and L-Selectin Mediate Distinct but Overlapping Functions in Endotoxin-Induced Leukocyte-Endothelial Interactions in the Rat Mesenteric Microcirculation
Kelly L. Davenpeck, Douglas A. Steeber, Thomas F. Tedder, and Bruce S. Bochner

1987 Selective Conversion of Big Endothelins to Tracheal Smooth Muscle-Constricting 31-Amino Acid-Length Endothelins by Chymase from Human Mast Cells
Ayako Nakano, Fumiko Kishi, Kazushi Minami, Hideki Wakabayashi, Yutaka Nakaya, and Hiroshi Kido

1993 Receptor Expression and Responsiveness of Human Dendritic Cells to a Defined Set of CC and CXC Chemokines
Silvano Sozzani, Walter Luini, Alessandro Borsatti, Nadia Polentarutti, Dan Zhou, Lorenzo Piemonti, Giovanna D'Amico, Christine A. Power, Timothy N. C. Wells, Marco Gobbi, Paola Allavena, and Alberto Mantovani

2001 Pathogenetic Effector Function of CD4-Positive T Helper 1 Cells in Hepatitis B Virus Transgenic Mice
Alessandra Franco, Luca G. Guidotti, Monte V. Hobbs, Valerie Pasquetto, and Francis V. Chisari

CLINICAL IMMUNOLOGY

2010 Characterization of Autoantibodies in Pemphigus Using Antigen-Specific Enzyme-Linked Immunosorbent Assays with Baculovirus-Expressed Recombinant Desmogleins
Ken Ishii, Masayuki Amagai, Russell P. Hall, Takashi Hashimoto, Atsushi Takayanagi, Shinobu Gamou, Nobuyoshi Shimizu, and Takeji Nishikawa

2018 Human T Cell Leukemia Virus Type I (HTLV-I)-Specific $CD8^+$ CTL Clones from Patients with HTLV-I-Associated Neurologic Disease Secrete Proinflammatory Cytokines, Chemokines, and Matrix Metalloproteinase
William E. Biddison, Ryuji Kubota, Taketo Kawanishi, Dennis D. Taub, William W. Cruikshank, David M. Center, Edward W. Connor, Ursula Utz, and Steven Jacobson

2026 Allergenic Properties of Ovomucoid in Man
Sara K. Cooke and Hugh A. Sampson

2033 Autoantibodies to Ribosomal P Proteins Penetrate into Live Hepatocytes and Cause Cellular Dysfunction in Culture
Mirna Koscec, Eugen Koren, Marianne Wolfson-Reichlin, Robert D. Fugate, Edward Trieu, Ira N. Targoff, and Morris Reichlin

2042 Accumulation of Human T Lymphotropic Virus (HTLV)-I-Specific T Cell Clones in HTLV-I-Associated Myelopathy/Tropical Spastic Paraparesis Patients
Torsten A. Höger, Steven Jacobson, Taketo Kawanishi, Tomohiro Kato, Kusuki Nishioka, and Kazuhiko Yamamoto

2049 HIV-1 Envelope-Specific $CD4^+$ T Helper Cells from Simian/Human Immunodeficiency Virus-Infected Rhesus Monkeys Recognize Epitopes Restricted by MHC Class II DRB10406 and DRBW201 Molecules
Christine Lekutis and Norman L. Letvin

2058 Intercellular Adhesion Molecule-1 Deficiency Protects MRL/MpJ-*Fas*^{lpr} Mice from Early Lethality
Daniel C. Bullard, Philip D. King, M. John Hicks, Bo Dupont, Arthur L. Beaudet, and Keith B. Elkon

2068 Author Index

VOLUME 159 / Nº 5 / SEPTEMBER 1, 1997

CUTTING EDGE

2075 Commentary: Conservation of Structural Features Reveals the Existence of a Large Family of Inhibitory Cell Surface Receptors and Noninhibitory/Activatory Counterparts
Frédéric Vély and Eric Vivier

2078 Induction of Thymocyte Deletion by Purified Single Peptide/Major Histocompatibility Complex Ligands
Sylvie Lesage, Josée Charron, Gary Winslow, and Patrice Hugo

2082 Protein Kinase Cα-Mediated Chronic Signal Transduction for Immunosenescence
Kozo Ohkusu, Jun Du, Ken-Ichi Isobe, Hong Yi, Anwarul A. Akhand, Masashi Kato, Haruhiko Suzuki, Hiroyoshi Hidaka, and Izumi Nakashima

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

2085 Memory, but Not Naive, Peripheral Blood B Lymphocytes Differentiate into Ig-Secreting Cells After CD40 Ligation and Costimulation with IL-4 and the Differentiation Factors IL-2, IL-10, and IL-3
Vincent Kindler and Rudolf H. Zubler

2091 Perforin-Dependent Cytotoxic Activity and Lymphokine Secretion by $CD4^+$ T Cells Are Regulated by $CD8^+$ T Cells
Noelle Sevilir Williams and Victor H. Engelhard

2100 Positive and Negative Selection of Functional Mouse CD4 Cells by Porcine MHC in Pig Thymus Grafts
Yong Zhao, Justin J. Sergio, Kirsten Swenson, J. Scott Arn, David H. Sachs, and Megan Sykes

2108 Human Autoreactive and Foreign Antigen-Specific T Cells Resist Apoptosis Induced by Soluble Recombinant CD95 Ligand
Frauke Zipp, Roland Martin, Rudolf Lichtenfels, Wilfried Roth, Johannes Dichgans, Peter H. Krammer, and Michael Weller

2116 Amplified Follicular Immune Complex Deposition in Mice Lacking the Fc Receptor γ-Chain Does Not Alter Maturation of the B Cell Response
Kalpit A. Vora, Jeffrey V. Ravetch, and Tim Manser

2125 A Mechanism Underlying Synergy Between IL-12 and IFN-γ-Inducing Factor in Enhanced Production of IFN-γ
Hyun-Jong Ahn, Seiji Maruo, Michio Tomura, Jie Mu, Toshiyuki Hamaoka, Kenji Nakanishi, Steven Clark, Masashi Kurimoto, Haruki Okamura, and Hiromi Fujiwara

2132 CD4 T Cell Anergy in Murine AIDS: Costimulation via CD28 and the Addition of IL-12 Are Not Sufficient to Rescue Anergic CD4 T Cells
Catherine Andrews, Susan L. Swain, and Girija Muralidhar

2139 The Effect of the Proteasome Inhibitor Lactacystin on the Presentation of Transporter Associated with Antigen Processing (TAP)-Dependent and TAP-Independent Peptide Epitopes by Class I Molecules
Ailin Bai and James Forman

2147 Non-MHC-Linked Th2 Cell Development Induced by Soluble Protein Administration Predicts Susceptibility to *Leishmania major* Infection
Jean-Charles Guéry, Francesca Galbiati, Simona Smiroldo, and Luciano Adorini

2154 CD94 Ligation Induces Apoptosis in a Subset of IL-2-Stimulated NK Cells
Hiroaki Ida, Michael J. Robertson, Stephan Voss, Jerome Ritz, and Paul Anderson

2161 Interleukin-11 Inhibits Macrophage Interleukin-12 Production
Shawn X. Leng and Jack A. Elias

2169 CD28-Induced Cytokine Production and Proliferation by Thymocytes Are Differentially Regulated by the $p59^{fyn}$ Tyrosine Kinase
Christopher J. Ong, Andrew S.-P. Lim, and Hung-Sia Teh

2177 Impaired Class II Expression and Antigen Uptake in Monocytic Cells After HIV-1 Infection
Steven Polyak, Houchu Chen, David Hirsch, Italas George, Robert Hershberg, and Kirk Sperber

2189 T Cells Bearing Vβ8 Are Preferentially Infected with Exogenous Mouse Mammary Tumor Virus
Narin Upragarin, Hitoshi Nishimura, Worawidh Wajjwalku, Yoshihiro Ando, Seiho Nagafuchi, Takeshi Watanabe, and Yasunobu Yoshikai

2196 Fas Ligand Expression Is Restricted to Nonlymphoid Thymic Components In Situ
Lars E. French, Anne Wilson, Michael Hahne, Isabelle Viard, Jürg Tschopp, and H. Robson MacDonald

2203 Antibodies Against Sialophorin (CD43) Enhance the Capacity of Dendritic Cells to Cluster and Activate T Lymphocytes
Emanuele Fanales-Belasio, Giovanna Zambruno, Andrea Cavani, and Giampiero Girolomoni

2212 IL-6 Triggers Cell Growth via the Ras-Dependent Mitogen-Activated Protein Kinase Cascade
Atsushi Ogata, Dharminder Chauhan, Gerrard Teoh, Steven P. Treon, Mitsuyoshi Urashima, Robert L. Schlossman, and Kenneth C. Anderson

2222 Developmental Pathways of Dendritic Cells in Vivo: Distinct Function, Phenotype, and Localization of Dendritic Cell Subsets in FLT3 Ligand-Treated Mice
B. Pulendran, J. Lingappa, M. K. Kennedy, J. Smith, M. Teepe, A. Rudensky, C. R. Maliszewski, and E. Maraskovsky

2232 Distinct Mechanisms for the Induction and Maintenance of Allograft Tolerance with CTLA4-Fc Treatment
Hanh M. Tran, Peter W. Nickerson, Anthony C. Restifo, Maria A. Ivis-Woodward, Anita Patel, Richard D. Allen, Terry B. Strom, and Philip J. O'Connell

2240 Cultured NK1.1$^+$CD4$^+$ T Cells Produce Large Amounts of IL-4 and IFN-γ Upon Activation by Anti-CD3 or CD1
Hangjiong Chen and William E. Paul

2250 CD99 (*MIC2*) Regulates the LFA-1/ICAM-1-Mediated Adhesion of Lymphocytes, and Its Gene Encodes Both Positive and Negative Regulators of Cellular Adhesion
Jang-Hee Hahn, Min Kyung Kim, Eun Young Choi, Soon Ha Kim, Hae Won Sohn, Don Il Ham, Doo Hyun Chung, Tae Jin Kim, Wang Jae Lee, Cheol Keun Park, Howe J. Ree, and Seong Hoe Park

2259 IL-7 Activates $\alpha_4\beta_1$ Integrin in Murine Thymocytes
Haruki Kitazawa, Kathrin Muegge, Raffaele Badolato, Ji-Ming Wang, William E. Fogler, Douglas K. Ferris, Chong-Kil Lee, Serge Candéias, Mark R. Smith, Joost J. Oppenheim, and Scott K. Durum

2265 The Proliferative In Vivo Activities of *lpr* Double-Negative T Cells and the Primary Role of p59^{fyn} in Their Activation and Expansion
Dimitrios Balomenos, Robert Rumold, and Argyrios N. Theofilopoulos

2274 Convergence of Schiff Base Costimulatory Signaling and TCR Signaling at the Level of Mitogen-Activated Protein Kinase ERK2
Huaqing Chen, Simon Hall, Brian Heffernan, Neil T. Thompson, Mark V. Rogers, and John Rhodes

2282 CD40 Ligand Induction on T Cell Subsets by Peptide-Presenting B Cells: Implications for Development of the Primary T and B Cell Response
Archana I. Jaiswal and Michael Croft

2292 The Lck SH2 Phosphotyrosine Binding Site Is Critical for Efficient TCR-Induced Processive Tyrosine Phosphorylation of the ζ-Chain and IL-2 Production
Linda A. Lewis, Chan D. Chung, Jing-yi Chen, Jane R. Parnes, Miriana Moran, Viresh P. Patel, and M. Carrie Miceli

2301 Expression of a *bcl-2* Transgene Reduces Proliferation and Slows Turnover of Developing B Lymphocytes In Vivo
Lorraine A. O'Reilly, Alan W. Harris, David M. Tarlinton, Lynn M. Corcoran, and Andreas Strasser

2312 Functional Mapping of the Orientation for TCR Recognition of an H2-K^b-Restricted Ovalbumin Peptide Suggests That the β-Chain Subunit Can Dominate the Determination of Peptide Side Chain Specificity
Stephen J. Turner, Stephen C. Jameson, and Francis R. Carbone

Molecular and Structural Immunology

2318 Analysis of Polymorphism in Porcine MHC Class I Genes: Alterations in Signals Recognized by Human Cytotoxic Lymphocytes
Jennifer A. Sullivan, Henry F. Oettinger, David H. Sachs, and Albert S. B. Edge

2327 The Glycosylation of IgA Produced by Murine B Cells Is Altered by Th2 Cytokines
Subba R. Chintalacharuvu and Steven N. Emancipator

2334 T Cell-Independent Response to *Brucella*-Insulin Identifies a Preimmune Repertoire for Insulin
James W. Thomas, Patricia M. Kralick, and U. Kevin Ewulonu

2342 Molecular Identification of a Novel Family of Human Ig Superfamily Members That Possess Immunoreceptor Tyrosine-Based Inhibition Motifs and Homology to the Mouse gp49B1 Inhibitory Receptor
Jonathan P. Arm, Chioma Nwankwo, and K. Frank Austen

2350 Absence of Functional Relevance of Human Transporter Associated with Antigen Processing Polymorphism for Peptide Selection
Soizic Daniel, Sophie Caillat-Zucman, Jürgen Hammer, Jean-François Bach, and Peter M. van Endert

2358 Assembly and Retention of CD1b Heavy Chains in the Endoplasmic Reticulum
Masahiko Sugita, Steven A. Porcelli, and Michael B. Brenner

Host Defense

2366 Cytolytic T Lymphocyte Recognition of the Immunodominant HLA-A0201-Restricted Melan-A/MART-1 Antigenic Peptide in Melanoma
Pedro Romero, Nadine Gervois, Jurg Schneider, Patricia Escobar, Danila Valmori, Christophe Pannetier, Alexander Steinle, Thomas Wolfel, Danielle Lienard, Vincent Brichard, Aline van Pel, Francine Jotereau, and Jean-Charles Cerottini

2375 Heat Shock Protein 65 Induced by γδ T Cells Prevents Apoptosis of Macrophages and Contributes to Host Defense in Mice Infected with *Toxoplasma gondii*
Hajime Hisaeda, Tohru Sakai, Hiroyuki Ishikawa, Yoichi Maekawa, Koji Yasutomo, Robert A. Good, and Kunisuke Himeno

2382 Superantigen Activation of Immune Cells Evokes Epithelial (T84) Transport and Barrier Abnormalities via IFN-γ and TNFα: Inhibition of Increased Permeability, but Not Diminished Secretory Responses by TGF-β_2
Derek M. McKay and Paramjit K. Singh

2391 Chimeric Peptides: A New Approach to Enhancing the Immunogenicity of Peptides with Low MHC Class I Affinity: Application in Antiviral Vaccination
Sophie Tourdot, Mohamed Oukka, Jean Claude Manuguerra, Vassiliki Magafa, Isabelle Vergnon, Nicole Riché, Martine Bruley-Rosset, Pavlos Cordopatis, and Konstadinos Kosmatopoulos

2399 Growth of P511 Mastocytoma Cells in BALB/c Mouse Brain Elicits CTL Response Without Tumor Elimination: A New Tumor Model for Regional Central Nervous System Immunity
Leslie B. Gordon, Scott C. Nolan, Helen F. Cserr, Paul M. Knopf, and Christine J. Harling-Berg

2409 Adsorption to Aluminum Hydroxide Promotes the Activity of IL-12 as an Adjuvant for Antibody as Well as Type 1 Cytokine Responses to HIV-1 gp120
Dragana Jankovic, Patricia Caspar, Martin Zweig, Maria Garcia-Moll, Stephen D. Showalter, Frederick R. Vogel, and Alan Sher

2418 Hydrogen Peroxide-Mediated Transcriptional Induction of Macrophage Colony-Stimulating Factor by TGF-β1
Yi-Hui Hong, Hai-Bing Peng, Vito La Fata, and James K. Liao

INFLAMMATION

2424 Human Monocyte Binding to Fibronectin Enhances IFN-γ-Induced Early Signaling Events
James B. McCarthy, Bina V. Vachhani, Sharon M. Wahl, David S. Finbloom, and Gerald M. Feldman

2431 Regulation of Tissue Inhibitor of Metalloproteinase-1 in Fibroblasts and Acute Phase Proteins in Hepatocytes In Vitro by Mouse Oncostatin M, Cardiotrophin-1, and IL-6
Carl D. Richards, Christine Kerr, Minoru Tanaka, Takahiko Hara, Atsushi Miyajima, Diane Pennica, Fernando Botelho, and Carrie M. Langdon

2438 Characterization of C3-Binding Proteins on Mouse Neutrophils and Platelets
Richard J. Quigg, Jessy J. Alexander, C. Frederick Lo, Alice Lim, Chun He, and V. Michael Holers

2445 Enhanced Expression of Inducible Cyclooxygenase with Age in Murine Macrophages
Michael G. Hayek, Casilda Mura, Dayong Wu, Alison A. Beharka, Sung Nim Han, K. Eric Paulson, Daniel Hwang, and Simin Nikbin Meydani

2452 Absence of IL-1 Signaling and Reduced Inflammatory Response in IL-1 Type I Receptor-Deficient Mice
Mark Labow, David Shuster, Maria Zetterstrom, Perla Nunes, Robert Terry, Emily B. Cullinan, Tamas Bartfai, Carmen Solorzano, Lyle L. Moldawer, Richard Chizzonite, and Kim W. McIntyre

2462 Chitin Particle-Induced Cell-Mediated Immunity Is Inhibited by Soluble Mannan: Mannose Receptor-Mediated Phagocytosis Initiates IL-12 Production
Yoshimi Shibata, W. James Metzger, and Quentin N. Myrvik

2468 Bridging of Neutrophils to Target Cells by Opsonized Zymosan Enhances the Cytotoxicity of Neutrophil-Produced H_2O_2
Xiaoxia Jiang, Tsai-Hung Wu, and Robert L. Rubin

2476 In Vivo Transfer of Engineered Macrophages into the Glomerulus: Endogenous TGF-β-Mediated Defense Against Macrophage-Induced Glomerular Cell Activation
Tamás S. Sütö, Leon G. Fine, Fujio Shimizu, and Masanori Kitamura

2484 Repeated Elicitation of Contact Hypersensitivity Induces a Shift in Cutaneous Cytokine Milieu from a T Helper Cell Type 1 to a T Helper Cell Type 2 Profile
Hideki Kitagaki, Naoko Ono, Kazuhito Hayakawa, Toshiki Kitazawa, Kozo Watanabe, and Tetsuo Shiohara

2492 Induction of IL-12 and Chemokines by Hyaluronan Requires Adhesion-Dependent Priming of Resident but Not Elicited Macrophages
Jennifer Hodge-Dufour, Paul W. Noble, Maureen R. Horton, Clare Bao, Maria Wysoka, Marie D. Burdick, Robert M. Strieter, Giorgio Trinchieri, and Ellen Puré

CLINICAL IMMUNOLOGY

2502 Changes in Cytokine Secretion Induced by Altered Peptide Ligands of Myelin Basic Protein Peptide 85–99
Lara J. Ausubel, Jeffrey I. Krieger, and David A. Hafler

2513 Functional Heterogeneity of HLA-A02 Subtypes Revealed by Presentation of a MAGE-3-Encoded Peptide to Cytotoxic T Cell Clones
Katharina Fleischhauer, Silvia Tanzarella, Vincenzo Russo, Maria Luisa Sensi, Pierre van der Bruggen, Claudio Bordignon, and Catia Traversari

2522 Prevention by Anti-LFA-1 of Acute Myoblast Death Following Transplantation
Benoît Guérette, Daniel Skuk, Florence Célestin, Christine Huard, François Tardif, Isabelle Asselin, Brigitte Roy, Marlyne Goulet, Raynald Roy, Mark Entman, and Jacques P. Tremblay

2532 Suppression of Autoimmune Disease and of Massive Lymphadenopathy in MRL/Mp-*lpr/lpr* Mice Lacking Tyrosine Kinase Fyn ($p59^{fyn}$)
Takeo Takahashi, Takeshi Yagi, Shizuko Kakinuma, Akira Kurokawa, Takao Okada, Kiyoshi Takatsu, Shin-ichi Aizawa, and Takuya Katagiri

2542 Author Index

VOLUME 159 / Nº 6 / SEPTEMBER 15, 1997

CUTTING EDGE

2549 CD44 Activation and Associated Primary Adhesion Is Inducible via T Cell Receptor Stimulation
Heather C. DeGrendele, Maria Kosfiszer, Pila Estess, and Mark H. Siegelman

2554 Isolation and Characterization of Exodus-2, a Novel C-C Chemokine with a Unique 37-Amino Acid Carboxyl-Terminal Extension
Robert Hromas, Chang H. Kim, Michael Klemsz, Mitchell Krathwohl, Kenneth Fife, Scott Cooper, Carol Schnizlein-Bick, and Hal E. Broxmeyer

2559 Regulation of Ku Expression in Normal Murine B Cells by Stimuli That Promote Switch Recombination
Piotr Zelazowski, Edward E. Max, Marilyn R. Kehry, and Clifford M. Snapper

2563 HEL-Flu: An Influenza Virus Containing the Hen Egg Lysozyme Epitope Recognized by $CD4^+$ T Cells from Mice Transgenic for an $\alpha\beta$ TCR
William S. Walker, Maria R. Castrucci, Mark Y. Sangster, Richard T. Carson, and Yoshihiro Kawaoka

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

2567 Regulation of Memory CD4 T Cell Adhesion by CD4-MHC Class II Interaction
Daniela P. Metz, Donna L. Farber, Rolf König, and Kim Bottomly

2574 Immunodominance Is Independent of Structural Constraints: Each Region Within Hen Eggwhite Lysozyme Is Potentially Available Upon Processing of Native Antigen
Kamal D. Moudgil, Debora Sekiguchi, Sue Y. Kim, and Eli E. Sercarz

2580 Immunocompromised Tumor-Bearing Mice Show a Selective Loss of STAT5a/b Expression in T and B Lymphocytes
Federica Pericle, Robert A. Kirken, Vincenzo Bronte, Giuseppe Sconocchia, Luis DaSilva, and David M. Segal

2586 Abnormal Regulation of Retinoic Acid Receptor β_2 Expression and Compromised Allograft Rejection in Transgenic Mice Expressing Antisense Sequences to Retinoic Acid Receptor β_1 and β_3
Jacques Bérard, Hongyu Luo, Huifang Chen, Myhala Mukuna, W. Edward C. Bradley, and Jiangping Wu

2599 Administration of IL-12 Induces a $CD3^+CD4^-CD8^-B220^+$ Lymphoid Population Capable of Eliciting Cytolysis Against Fas-Positive Tumor Cells
Tateki Tsutsui, Jie Mu, Makoto Ogawa, Wen-Gong Yu, Takashi Suda, Shigekazu Nagaga, Fumitaka Saji, Yuji Murata, Hiromi Fujiwara, and Toshiyuki Hamaoka

2606 T Cell Receptor Diversity in CTLs Specific for the CTT-1 and CTT-2 Minor Histocompatibility Antigens
Sean L. Johnston and Peter J. Wettstein

2616 IL-4-Independent Regulation of In Vivo IL-9 Expression
Philippe Monteyne, Jean-Christophe Renauld, Johan Van Broeck, David W. Dunne, Frank Brombacher, and Jean-Paul Coutelier

2624 Functional Effects of Overexpression of Protein Kinase C-α, -β, -δ, -ϵ, and -η in the Mast Cell Line RBL-2H3
En-Yuh Chang, Zoltan Szallasi, Peter Ács, Vivek Raizada, Patricia C. Wolfe, Clare Fewtrell, Peter M. Blumberg, and Juan Rivera

2633 Characterization of Anti-Single-Stranded DNA B Cells in a Non-Autoimmune Background
Kim-Anh T. Nguyen, Laura Mandik, Anh Bui, Joshua Kavaler, Amanda Norvell, John G. Monroe, Jessica H. Roark, and Jan Erikson

2645 Increased Sensitivity of Gastric Cancer Cells to Natural Killer and Lymphokine-Activated Killer Cells by Antisense Suppression of *N*-Acetylgalactosaminyltransferase
Takeya Adachi, Yuji Hinoda, Isao Nishimori, Masaaki Adachi, and Kohzoh Imai

2652 CD154/CD40 and CD70/CD27 Interactions Have Different and Sequential Functions in T Cell-Dependent B Cell Responses: Enhancement of Plasma Cell Differentiation by CD27 Signaling
Serge Jacquot, Tetsuji Kobata, Satoshi Iwata, Chikao Morimoto, and Stuart F. Schlossman

2658 Delay in the Onset of Systemic Lupus Erythematosus Following Treatment With the Immunomodulator AS101: Association With IL-10 Inhibition and Increase in TNF-α Levels
Yona Kalechman, Uzi Gafter, Ji Ping Da, Michael Albeck, Donato Alarcon-Segovia, and Benjamin Sredni

2668 Relationship Between Proliferation and Susceptibility to CD95- and CD2-Mediated Apoptosis in Stimulated Primary T Lymphocytes: T Cells Manifesting Proliferative Unresponsiveness Are Preferentially Susceptible to CD95-Mediated Apoptosis
Bertrand Mollereau, Dominique Blanchard, Olivier Déas, Céline Dumont, Didier Métivier, Alain Bernard, Jeffrey T. McGrew, Bernard Charpentier, Aimé Vazquez, and Anna Senik

2678 Transcription Factor Egr-1 Activity Down-Regulates Fas and CD23 Expression in B Cells
Adelheid Dinkel, Wilhelm K. Aicher, Christian Haas, Peter F. Zipfel, Hans-Hartmut Peter, and Hermann Eibel

2685 Low Affinity of Cell Surface Lymphocyte Function-Associated Antigen-1 (LFA-1) Generates Selectivity for Cell-Cell Interactions
Gauri Ganpule, Ruth Knorr, James M. Miller, Christopher P. Carron, and Michael L. Dustin

2693 E-Cadherin-Mediated Adhesion Involving Langerhans Cell-Like Dendritic Cells Expanded from Murine Fetal Skin
Thilo Jakob, Atsushi Saitoh, and Mark C. Udey

2702 Phorbol Myristate Acetate Stimulates the Dimerization of CD44 Involving a Cysteine in the Transmembrane Domain
Dacai Liu and Man-Sun Sy

2712 Primary B Cell Development Is Impaired in Mice with Defects of the Pituitary/Thyroid Axis
Encarnacion Montecino-Rodriguez, Ross G. Clark, Lyn Powell-Braxton, and Kenneth Dorshkind

2720 Introduction of Exogenous Class II *Trans*-Activator in MHC Class II-Deficient ABI Fibroblasts Results in Incomplete Rescue of MHC Class II Antigen Expression
Ad Peijnenburg, Sam J. P. Gobin, Marja C. J. A. van Eggermond, Barbara C. Godthelp, Niels van Graafeiland, and Peter J. van den Elsen

2728 Leukocyte Function-Associated Antigen-1-Dependent Lysis of Fas^+ ($CD95^+$/Apo-1^+) Innocent Bystanders by Antigen-Specific $CD8^+$ CTL
Hidefumi Kojima, Koji Eshima, Hajime Takayama, and Michail V. Sitkovsky

MOLECULAR AND STRUCTURAL IMMUNOLOGY

2735 Redundant Expression but Selective Utilization of Nuclear Factor of Activated T Cells Family Members
Luika A. Timmerman, James I. Healy, Steffan N. Ho, Lei Chen, Christopher C. Goodnow, and Gerald R. Crabtree

2741 Expression in BALB/c and C57BL/6 Mice of Rt6–1 and Rt6–2 ADP-Ribosyltransferases That Differ in Enzymatic Activity: C57BL/6 Rt6–1 is a Natural Transferase Knockout
Toshihiro Kanaitsuka, Rita Bortell, Linda A. Stevens, Joel Moss, Deborah Sardinha, T. V. Rajan, Danny Zipris, John P. Mordes, Dale L. Greiner, and Aldo A. Rossini

2750 Novel HY Peptide Antigens Presented by HLA-B27
William A. Simmons, Scott G. Summerfield, Derry C. Roopenian, Clive A. Slaughter, Aamir R. Zuberi, Simon J. Gaskell, Robert S. Bordoli, John Hoyes, Carolyn R. Moomaw, Robert A. Colbert, Louise Y.-W. Leong, Geoffrey W. Butcher, Robert E. Hammer, and Joel D. Taurog

2760 The Mouse Genes Encoding the Third Pair of β-Type Proteasome Subunits Regulated Reciprocally by IFN-γ: Structural Comparison, Chromosomal Localization, and Analysis of the Promoter
Masaru Hayashi, Teruo Ishibashi, Keiji Tanaka, and Masanori Kasahara

2771 Alternative Peptide Binding Motifs of Qa-2 Class Ib Molecules Define Rules for Binding of Self and Nonself Peptides
Piotr Tabaczewski, Eugene Chiang, Maile Henson, and Iwona Stroynowski

2782 Identification of Residues in the Class II-Associated Ii Peptide (CLIP) Region of Invariant Chain That Affect Efficiency of MHC Class II-Mediated Antigen Presentation in an Allele-Dependent Manner
Anand M. Gautam, Maria Yang, Peter J. Milburn, Rohan Baker, Aparna Bhatnagar, James McCluskey, and Tanya Boston

2789 Activation and Transdominant Suppression of MHC Class II and HLA-DMB Promoters by a Series of C-Terminal Class II Transactivator Deletion Mutants
Keh-Chuang Chin, Guoxuan Li, and Jenny P.-Y. Ting

HOST DEFENSE

2795 MHC Class Ib-Restricted Cells Contribute to Antilisterial Immunity: Evidence for Qa-1^b as a Key Restricting Element for *Listeria*-Specific CTLs
H. G. Archie Bouwer, Michael S. Seaman, James Forman, and David J. Hinrichs

2802 Recognition of the Latency-Associated Immediate Early Protein IE63 of Varicella-Zoster Virus by Human Memory T Lymphocytes
Catherine Sadzot-Delvaux, Paul R. Kinchington, Serge Debrus, Bernard Rentier, and Ann M. Arvin

2807 Early Neutralizing Antibody Response Against Mouse Mammary Tumor Virus: Critical Role of Viral Infection and Superantigen-Reactive T Cells
Sanjiv A. Luther, Ivan Maillard, Frédéric Luthi, Leonardo Scarpellino, Heidi Diggelmann, and Hans Acha-Orbea

2815 Involvement of the *ras*-Like GTPase rab3d in RBL-2H3 Mast Cell Exocytosis Following Stimulation via High Affinity IgE Receptors (FcεRI)
Michèle Roa, Fabienne Paumet, Joëlle Le Mao, Bernard David, and Ulrich Blank

2824 Tuberculosis Generates a Microenvironment Enhancing the Productive Infection of Local Lymphocytes by HIV
Valérie Garrait, Jacques Cadranel, Hélène Esvant, Isabelle Herry, Pierre Morinet, Charles Mayaud, and Dominique Israël-Biet

2831 Heterogeneity of Biologic Responses of Melanoma-Specific CTL
Jean-François Fonteneau, Eric Le Dréan, Soizic Le Guiner, Nadine Gervois, Elisabeth Diez, and Francine Jotereau

2840 CD28 Expression by Mouse Mast Cells Is Modulated by Lipopolysaccharide and Outer Surface Protein A Lipoprotein from *Borrelia burgdorferi*
Eric V. Marietta, Janis J. Weis, and John H. Weis

2849 Metacyclogenesis Modulates the Ability of *Leishmania* Promastigotes to Induce IL-12 Production in Human Mononuclear Cells
Alexandrina Sartori, Milton A. P. Oliveira, Phillip Scott, and Giorgio Trinchieri

2858 IL-10 Improves Lung Injury and Survival in *Pseudomonas aeruginosa* Pneumonia
Teiji Sawa, David B. Corry, Michael A. Gropper, Maria Ohara, Kiyoyasu Kurahashi, and Jeanine P. Wiener-Kronish

INFLAMMATION

2867 DBA/1 Mice Expressing the Human TNF-α Transgene Develop a Severe, Erosive Arthritis: Characterization of the Cytokine Cascade and Cellular Composition
Debra M. Butler, Anne-Marie Malfait, Lesley J. Mason, Paul J. Warden, George Kollias, Ravinder N. Maini, Marc Feldmann, and Fionula M. Brennan

2877 Opsonized Zymosan Stimulates the Redistribution of Protein Kinase C Isoforms in Human Neutrophils
Susan Sergeant and Linda C. McPhail

2886 IL-1β Depresses Expression of the 70-Kilodalton Heat Shock Protein and Sensitizes Glomerular Cells to Oxidant-Initiated Apoptosis
Takashi Yokoo and Masanori Kitamura

2893 Neutrophil Transendothelial Migration Is Independent of Tight Junctions and Occurs Preferentially at Tricellular Corners
Alan R. Burns, David C. Walker, Evelyn S. Brown, Lisa T. Thurmon, Robert A. Bowden, Charles R. Keese, Scott I. Simon, Mark L. Entman, and C. Wayne Smith

2904 Human Mast Cells Produce the $CD4^+$ T Lymphocyte Chemoattractant Factor, IL-16
Vanitcha Rumsaeng, William W. Cruikshank, Barbara Foster, Calman Prussin, Arnold S. Kirshenbaum, Thomas A. Davis, Hardy Kornfeld, David M. Center, and Dean D. Metcalfe

2911 Effect of Recombinant Human IL-4 on Tryptase, Chymase, and Fcε Receptor Type I Expression in Recombinant Human Stem Cell Factor-Dependent Fetal Liver-Derived Human Mast Cells
Han-Zhang Xia, Zhongmin Du, Shirley Craig, Gregory Klisch, Nancy Noben-Trauth, Jarema P. Kochan, Thomas H. Huff, Anne-Marie A. Irani, and Lawrence B. Schwartz

2922 Functional Role for the Myeloid Differentiation Antigen CD14 in the Activation of Human Monocytes by IL-2
Maria Carla Bosco, Igor Espinoza-Delgado, Tammy K. Rowe, Maria Grazia Malabarba, Dan L. Longo, and Luigi Varesio

2932 Suppression of TNF-α Secretion by Azelastine in a Rat Mast (RBL-2H3) Cell Line: Evidence for Differential Regulation of TNF-α Release, Transcription, and Degranulation
Izumi Hide, Nobuko Toriu, Tomomi Nuibe, Atsuko Inoue, Michihiro Hide, Shoso Yamamoto, and Yoshihiro Nakata

2941 IL-15 Functions as a Potent Autocrine Regulator of Macrophage Proinflammatory Cytokine Production: Evidence for Differential Receptor Subunit Utilization Associated with Stimulation or Inhibition
David G. Alleva, Steven B. Kaser, M. Alexandra Monroy, Matthew J. Fenton, and David I. Beller

2952 Effects of 5-Oxo-6,8,11,14-Eicosatetraenoic Acid on Expression of CD11b, Actin Polymerization, and Adherence in Human Neutrophils
William S. Powell, Sylvie Gravel, Fawaz Halwani, Charles S. Hii, Zhi Hua Huang, Anne-Marie Tan, and Antonio Ferrante

CLINICAL IMMUNOLOGY

2962 Cutaneous Injection of RANTES Causes Eosinophil Recruitment: Comparison of Nonallergic and Allergic Human Subjects
Lisa A. Beck, Scott Dalke, Kristin M. Leiferman, Carol A. Bickel, Robert Hamilton, Hugh Rosen, Bruce S. Bochner, and Robert P. Schleimer

2973 Defective TCR-Mediated Signaling in Synovial T Cells in Rheumatoid Arthritis
Madelon M. Maurice, Arjan C. Lankester, Anja C. Bezemer, Minke F. Geertsma, Paul-Peter Tak, Ferdinand C. Breedveld, René A. W. van Lier, and Cornelis L. Verweij

2979 Induction of TNF-α in Human Peripheral Blood Mononuclear Cells by the Mannoprotein of *Cryptococcus neoformans* Involves Human Mannose Binding Protein
Wendy Chaka, André F. M. Verheul, Varsha V. Vaishnav, Robert Cherniak, Jelle Scharringa, Jan Verhoef, Harm Snippe, and Andy I. M. Hoepelman

2986 Increased Expression of Signaling Lymphocytic Activation Molecule in Patients with Rheumatoid Arthritis and Its Role in the Regulation of Cytokine Production in Rheumatoid Synovium
Pia Isomäki, Gregorio Aversa, Benjamin G. Cocks, Reijo Luukkainen, Riitta Saario, Paavo Toivanen, Jan E. de Vries, and Juha Punnonen

2994 Cerebrospinal Fluid Cytokines in Pediatric Neuropsychiatric Disease
Barbara B. Mittleman, F. Xavier Castellanos, Leslie K. Jacobsen, Judith L. Rapoport, Susan E. Swedo, and Gene M. Shearer

3000 HIV-1 gp120 Induces an Association Between CD4 and the Chemokine Receptor CXCR4
Sophie Ugolini, Maxime Moulard, Isabelle Mondor, Nicolas Barois, Denis Demandolx, James Hoxie, Anne Brelot, Marc Alizon, Jean Davoust, and Quentin J. Sattentau

3009 Regulation of Antigen-Specific IgE, IgG1, and Mast Cell Responses to Ingested Allergen by Mucosal Tolerance Induction
Astrid G. van Halteren, Maarten J. van der Cammen, Deborah Cooper, Huub F. Savelkoul, Georg Kraal, and Patrick G. Holt

3016 Tolerance to a Dominant T Cell Epitope in the Acetylcholine Receptor Molecule Induces Epitope Spread and Suppresses Murine Myasthenia Gravis
Bo Wu, Caishu Deng, Elzbieta Goluszko, and Premkumar Christadoss

3024 DNA-Binding Antibodies from Viable Motheaten Mutant Mice: Implications for B Cell Tolerance
Connie M. Westhoff, Amy Whittier, Shannon Kathol, Jackie McHugh, Carlye Zajicek, Leonard D. Shultz, and Dwane E. Wylie

3034 Cytokine Patterns in Tuberculous and Sarcoid Granulomas: Correlations with Histopathologic Features of the Granulomatous Response
Anne Bergeron, Marcel Bonay, Marianne Kambouchner, Denise Lecossier, Marc Riquet, Paul Soler, Allan Hance, and Abdellatif Tazi

3044 IL-7 Overexpression in Transgenic Mouse Keratinocytes Causes a Lymphoproliferative Skin Disease Dominated by Intermediate TCR Cells: Evidence for a Hierarchy in IL-7 Responsiveness Among Cutaneous T Cells
Ifor R. Williams, Elizabeth A. Rawson, Lisa Manning, Themis Karaoli, Benjamin E. Rich, and Thomas S. Kupper

3057 Tumor-Induced Suppression of T Lymphocyte Proliferation Coincides with Inhibition of Jak3 Expression and IL-2 Receptor Signaling: Role of Soluble Products from Human Renal Cell Carcinomas
Vladimir Kolenko, Qiu Wang, M. C. Riedy, John O'Shea, Jerome Ritz, Martha K. Cathcart, Patricia Rayman, Raymond Tubbs, Mark Edinger, Andrew Novick, Ronald Bukowski, and James Finke

3068 Reduced Expression of *Tap1* and *Lmp2* Antigen-Processing Genes in the Nonobese Diabetic (NOD) Mouse Due to a Mutation in Their Shared Bidirectional Promoter
Gang Yan, Yineng Fu, and Denise L. Faustman

3081 Author Index

VOLUME 159 / Nº 7 / OCTOBER 1, 1997

CUTTING EDGE

3093 Commentary: Generation of Diversity in Mammalian Gut-Associated Lymphoid Tissues: Restricted V Gene Usage Does Not Preclude Complex V Gene Organization
Claude-Agnès Reynaud, Vinciane Dufour, and Jean-Claude Weill

3096 Fas and Fas Ligand Enhance the Pathogenesis of Experimental Allergic Encephalomyelitis, but Are Not Essential for Immune Privilege in the Central Nervous System
Kimberly A. Sabelko, Kathleen A. Kelly, Moon H. Nahm, Anne H. Cross, and John H. Russell

3100 Fas- and FasL-Deficient Mice Are Resistant to Induction of Autoimmune Encephalomyelitis
Hanspeter Waldner, Raymond A. Sobel, Edward Howard, and Vijay K. Kuchroo

3104 Long-Term Inhibition of Murine Lupus by Brief Simultaneous Blockade of the B7/CD28 and CD40/gp39 Costimulation Pathways
David I. Daikh, Barbara K. Finck, Peter S. Linsley, Diane Hollenbaugh, and David Wofsy

3109 Thymic Expression of Autoantigens Correlates with Resistance to Autoimmune Disease
Charles E. Egwuagu, Puwat Charukamnoetkanok, and Igal Gery

3113 Induction of Tissue-Specific Autoimmune Prostatitis with Prostatic Acid Phosphatase Immunization: Implications for Immunotherapy of Prostate Cancer
Lawrence Fong, Curtis L. Ruegg, Dirk Brockstedt, Edgar G. Engleman, and Reiner Laus

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

3119 Mitogenicity of DNA from Different Organisms for Murine B Cells
Siquan Sun, Caroline Beard, Rudolf Jaenisch, Peter Jones, and Jonathan Sprent

3126 B Cells in the Bursa of Fabricius Express a Novel C-Type Lectin Gene
Ryo Goitsuka, Chen-lo H. Chen, and Max D. Cooper

3133 B Cells Genetically Deficient in the c-Rel Transactivation Domain Have Selective Defects in Germline C_H Transcription and Ig Class Switching
Piotr Zelazowski, Daniel Carrasco, Fabio R. Rosas, Mark A. Moorman, Rodrigo Bravo, and Clifford M. Snapper

3140 Cyclosporine-Insensitive Partial Signaling and Multiple Roles of Ca^{2+} in Fas Ligand-Induced Lysis
Amy M. Rogers, Anja R. B. Thilenius, and John H. Russell

3148 CTL Generation in the Presence of IL-4 Is Inhibited by Free p40: Evidence for Early and Late IL-12 Function
Kaveh Abdi and Steven H. Herrmann

3156 Induction of T Cell Clonal Anergy Results in Resistance, Whereas CD28-Mediated Costimulation Primes for Susceptibility to Fas- and Bax-Mediated Programmed Cell Death
Vassiliki A. Boussiotis, Bohyung J. Lee, Gordon J. Freeman, John G. Gribben, and Lee M. Nadler

3168 B Cell Receptor Cross-Linking Prevents Fas-Induced Cell Death by Inactivating the IL-1β-Converting Enzyme Protease and Regulating Bcl-2/Bcl-x Expression
Alexandra Brás, Carlos Martinez-A., and Elena Baixeras

3178 Regulation of Human Monocyte Apoptosis by the CD14 Molecule
Stefan Heidenreich, Michael Schmidt, Christian August, Paul Cullen, André Rademaekers, and Hans-Gerd Pauels

3189 NK Cell Receptor Calibration: Effects of MHC Class I Induction on Killing by $Ly49A^{high}$ and $Ly49A^{low}$ NK Cells
Mats Y. Olsson-Alheim, Margarita Salcedo, Hans-Gustaf Ljunggren, Klas Kärre, and Charles L. Sentman

3195 Down-Regulation of the Expression and Function of the Transporter Associated with Antigen Processing in Murine Tumor Cell Lines Expressing IL-10
Flavio Salazar-Onfray, Jehad Charo, Max Petersson, Sofia Freland, Gabriele Noffz, Zhihai Qin, Thomas Blankenstein, Hans-Gustaf Ljunggren, and Rolf Kiessling

3203 Differential Requirement of Protein Tyrosine Kinases and Protein Kinase C in the Regulation of T Cell Locomotion in Three-Dimensional Collagen Matrices
Frank Entschladen, Bernd Niggemann, Kurt S. Zänker, and Peter Friedl

3211 HLA-DR-Triggered Inhibition of Hemopoiesis Involves Fas/Fas Ligand Interactions and Is Prevented by c-*kit* Ligand
Jong Wook Lee, Geoffrey M. Gersuk, Peter A. Kiener, Cassandra Beckham, Jeffrey A. Ledbetter, and H. Joachim Deeg

3220 The SH3 Domain of Itk/Emt Binds to Proline-Rich Sequences in the Cytoplasmic Domain of the T Cell Costimulatory Receptor CD28
Luc E. M. Marengère, Klaus Okkenhaug, Anne Clavreul, Dominique Couez, Spencer Gibson, Gordon B. Mills, Tak W. Mak, and Robert Rottapel

3230 In Vivo T Helper Cell Response to Retro-Inverso Peptidomimetics
Chrystelle Mézière, Mireille Viguier, Hélène Dumortier, Richard Lo-Man, Claude Leclerc, Jean-Gérard Guillet, Jean-Paul Briand, and Sylviane Muller

3238 The Processing Routes Determined by Negatively Charged Residues in DR1-Restricted T Cell Determinants
Chantal Robadey, Wim Ammerlaan, Claude Muller, Isabelle Cloutier, Rafick-Pierre Sékaly, Jacques-Antoine Haefliger, and Stéphane Demotz

3247 Human Endothelial Cell Costimulation of T Cell IFN-γ Production
David M. Briscoe, Lori E. Henault, Christopher Geehan, Stephen I. Alexander, and Andrew H. Lichtman

3257 Partial Activation of Naive CD4 T cells and Tolerance Induction in Response to Peptide Presented by Resting B Cells
Michael Croft, Sean B. Joseph, and Kent T. Miner

3266 γδ T Cells of Human Early Pregnancy Decidua: Evidence for Local Proliferation, Phenotypic Heterogeneity, and Extrathymic Differentiation
Lucia Mincheva-Nilsson, Maria Kling, Sten Hammarström, Olga Nagaeva, Karl-Gösta Sundqvist, Marie-Louise Hammarström, and Vladimir Baranov

3278 Regulation of B Lymphocyte Development and Activation by the CD19/CD21/CD81/Leu 13 Complex Requires the Cytoplasmic Domain of CD19
Shinichi Sato, Ann S. Miller, Maureen C. Howard, and Thomas F. Tedder

3288 Characterization of Lymphotoxin-αβ Complexes on the Surface of Mouse Lymphocytes
Jeffrey L. Browning, Irene Dougas Sizing, Pornsri Lawton, Paul R. Bourdon, Paul D. Rennert, Gerard R. Majeau, Christine M. Ambrose, Catherine Hession, Konrad Miatkowski, David A. Griffiths, Apinya Ngam-ek, Werner Meier, Christopher D. Benjamin, and Paula S. Hochman

3299 Cytotoxic Activities of Recombinant Soluble Murine Lymphotoxin-α and Lymphotoxin-αβ Complexes
Fabienne Mackay, Paul R. Bourdon, David A. Griffiths, Pornsri Lawton, Mohammad Zafari, Irene Dougas Sizing, Konrad Miatkowski, Apinya Ngam-ek, Christopher D. Benjamin, Catherine Hession, Christine M. Ambrose, Werner Meier, and Jeffrey L. Browning

MOLECULAR AND STRUCTURAL IMMUNOLOGY

3311 Identification of a Novel MHC Class I Gene, *Mamu-AG*, Expressed in the Placenta of a Primate with an Inactivated *G* Locus
Jonathan E. Boyson, Kristen K. Iwanaga, Thaddeus G. Golos, and David I. Watkins

3322 Vα3.2 Selection in MHC Class I Mutant Mice: Evidence for an Alternate Orientation of TCR-MHC Class I Interaction
Bee-Cheng Sim, Paul J. Travers, and Nicholas R. J. Gascoigne

3330 Cooperation of Binding Sites for STAT6 and NFκB/*rel* in the IL-4-Induced Up-Regulation of the Human IgE Germline Promoter
Birgit Messner, Adrian M. Stütz, Bettina Albrecht, Susanna Peiritsch, and Maximilian Woisetschläger

3338 TCR-δ Gene Rearrangement and Selection During Fetal Thymocyte Development
Oliver M. Wilbert, Julia Weber-Arden, Dieter Kabelitz, and Bernhard Arden

3347 In Vitro Triggering of Somatic Mutation in Human Naive B Cells
Diane Razanajaona, Stéphane Denépoux, Dominique Blanchard, Odette de Bouteiller, Yong-Jun Liu, Jacques Banchereau, and Serge Lebecque

3354 Domain-Switched Mouse IgM/IgG2b Hybrids Indicate Individual Roles for Cμ2, Cμ3, and Cμ4 Domains in the Regulation of the Interaction of IgM with Complement C1q
Frieda H. Chen, Sudha K. Arya, Aline Rinfret, David E. Isenman, Marc J. Shulman, and Robert H. Painter

3364 Phenotypic and Functional Characterization of Mice That Lack the Type I Receptor for IL-1
Moira B. Glaccum, Kim L. Stocking, Keith Charrier, Jeffrey L. Smith, Cindy R. Willis, Charles Maliszewski, David J. Livingston, Jacques J. Peschon, and Philip J. Morrissey

3372 Flexibility of Human IgG Subclasses
Kenneth H. Roux, Lioudmila Strelets, and Terje E. Michaelsen

3383 Position-Dependent Variegation of a CD4 Minigene With Targeted Expression to Mature $CD4^+$ T Cells
Olivier Boyer, Jing Chao Zhao, José L. Cohen, Danielle Depetris, Micael Yagello, Laurence Lejeune, Sylvie Bruel, Marie-Geneviève Mattéi, and David Klatzmann

3391 Abbreviated Junctional Sequences Impoverish Antibody Diversity in Urodele Amphibians
Hemal M. Patel and Ellen Hsu

HOST DEFENSE

3400 Complete Protective Immunity Induced in Mice by Immunization with the 19-Kilodalton Carboxyl-Terminal Fragment of the Merozoite Surface Protein-1 ($MSP1_{19}$) of *Plasmodium yoelii* Expressed in *Saccharomyces cerevisiae*: Correlation of Protection with Antigen-Specific Antibody Titer, but Not with Effector $CD4^+$ T Cells
Chakrit Hirunpetcharat, Jing-Hui Tian, David C. Kaslow, Nico van Rooijen, Sanjai Kumar, Jay A. Berzofsky, Louis H. Miller, and Michael F. Good

3412 Human Herpesvirus 7 Induces the Down-Regulation of CD4 Antigen in Lymphoid T Cells Without Affecting $p56^{lck}$ Levels
Paola Secchiero, Davide Gibellini, Louis Flamand, Iole Robuffo, Marco Marchisio, Silvano Capitani, Robert C. Gallo, and Giorgio Zauli

3424 Induction of Protective CTL Responses Against the *Plasmodium yoelii* Circumsporozoite Protein by Immunization with Peptides
Eileen D. Franke, Giampietro Corradin, and Stephen L. Hoffman

3434 Characterization of T Cell-Mediated Responses in Nonhealing and Healing *Leishmania major* Infections in the Absence of Endogenous IL-4
Pascale Kropf, Robert Etges, Lisa Schopf, Charles Chung, Joe Sypek, and Ingrid Müller

3444 IFN-γ Is Not Required in the IL-12 Response to Vesicular Stomatitis Virus Infection of the Olfactory Bulb
Takashi Komatsu and Carol S. Reiss

3453 Influenza Infection of β_2-Microglobulin-Deficient ($\beta_2m^{-/-}$) Mice Reveals a Loss of $CD4^+$ T Cell Functions with Aging
Scott F. Taylor, Robert J. Cottey, Dani S. Zander, and Bradley S. Bender

3460 CD28/B7 Interactions Are Required for Sustaining the Graft-Versus-Leukemia Effect of Delayed Post-Bone Marrow Transplantation Splenocyte Infusion in Murine Recipients of Myeloid or Lymphoid Leukemia Cells
Bruce R. Blazar, Patricia A. Taylor, Michael W. Boyer, Angela Panoskaltsis-Mortari, James P. Allison, and Daniel A. Vallera

3474 Interaction of IgA with Fcα Receptors of Human Mesangial Cells Activates Transcription Factor Nuclear Factor-κB and Induces Expression and Synthesis of Monocyte Chemoattractant Protein-1, IL-8, and IFN-Inducible Protein 10
Natalia Duque, Carmen Gómez-Guerrero, and Jesús Egido

INFLAMMATION

3483 Protective Effects of IL-4, IL-10, IL-12, and IL-13 in IgG Immune Complex-Induced Lung Injury: Role of Endogenous IL-12
Michael S. Mulligan, Roscoe L. Warner, Jami L. Foreback, Thomas P. Shanley, and Peter A. Ward

3490 IL-12 Induces IFN-γ Expression and Secretion in Mouse Peritoneal Macrophages
Patrizia Puddu, Laura Fantuzzi, Paola Borghi, Barbara Varano, Gabriella Rainaldi, Eric Guillemard, Walter Malorni, Pascale Nicaise, Stanley F. Wolf, Filippo Belardelli, and Sandra Gessani

3498 Ligation of L-Selectin on T Lymphocytes Activates β_1 Integrins and Promotes Adhesion to Fibronectin
Patricia A. Giblin, Sam T. Hwang, Tamiko R. Katsumoto, and Steven D. Rosen

3508 TNF Initiates E-Selectin Transcription in Human Endothelial Cells Through Parallel TRAF-NF-κB and TRAF-RAC/CDC42-JNK-c-Jun/ATF2 Pathways
Wang Min and Jordan S. Pober

3519 Dual Effects of LPS Antibodies on Cellular Uptake of LPS and LPS-Induced Proinflammatory Functions
Matthew Pollack, Christopher A. Ohl, Douglas T. Golenbock, Franco Di Padova, Larry M. Wahl, Nancy L. Koles, Gretchen Guelde, and Brian G. Monks

3531 Colchicine Down-Regulates Lipopolysaccharide-Induced Granulocyte-Macrophage Colony-Stimulating Factor Production in Murine Macrophages
Padmini Rao, Lydia A. Falk, Suanne F. Dougherty, Tomohiro Sawada, and Dov H. Pluznik

3540 Human Tryptase Fibrinogenolysis Is Optimal at Acidic pH and Generates Anticoagulant Fragments in the Presence of the Anti-Tryptase Monoclonal Antibody B12
Shunlin Ren, Amy E. Lawson, Marcus Carr, Clive M. Baumgarten, and Lawrence B. Schwartz

3549 The Role of IFN Regulatory Factor-1 in Synovitis and Nitric Oxide Production
Akihiro Shiraishi, Jean Dudler, and Martin Lotz

3555 α_1-Acid Glycoprotein and α_1-Antitrypsin Inhibit TNF-Induced but Not Anti-Fas-Induced Apoptosis of Hepatocytes in Mice
Wim Van Molle, Claude Libert, Walter Fiers, and Peter Brouckaert

3565 Mycobacterial and Schistosomal Antigen-Elicited Granuloma Formation in IFN-γ and IL-4 Knockout Mice: Analysis of Local and Regional Cytokine and Chemokine Networks
Stephen W. Chensue, Kelly Warmington, Jeffrey H. Ruth, Nicholas Lukacs, and Steven L. Kunkel

3574 Comparison of E-Selectin-Binding Glycoprotein Ligands on Human Lymphocytes, Neutrophils, and Bovine γδ T Cells
Ward M. Jones, Gayle M. Watts, Martyn K. Robinson, Dietmar Vestweber, and Mark A. Jutila

3584 Activation of Phospholipase A_2 by Complement C5b-9 in Glomerular Epithelial Cells
Mandip Panesar, Joan Papillon, Alison J. McTavish, and Andrey V. Cybulsky

3595 Chemokine Networks In Vivo: Involvement of C-X-C and C-C Chemokines in Neutrophil Extravasation In Vivo in Response to TNF-α
Philippe A. Tessier, Paul H. Naccache, Ian Clark-Lewis, Ronald P. Gladue, Kuldeep S. Neote, and Shaun R. McColl

CLINICAL IMMUNOLOGY

3604 Constitutive Intra-Articular Expression of Human IL-1β Following Gene Transfer to Rabbit Synovium Produces All Major Pathologies of Human Rheumatoid Arthritis
Steven C. Ghivizzani, Richard Kang, Helga I. Georgescu, Eric R. Lechman, Daniel Jaffurs, J. Michael Engle, Simon C. Watkins, Michael H. Tindal, Maureen K. Suchanek, Lorraine R. McKenzie, Christopher H. Evans, and Paul D. Robbins

3613 Human IgG2 Variants of Chimeric Anti-CD3 Are Nonmitogenic to T Cells
Michael S. Cole, Claudio Anasetti, and J. Yun Tso

3622 TGF-β Production Regulates the Development of the 2,4,6-Trinitrophenol-Conjugated Keyhole Limpet Hemocyanin-Induced Colonic Inflammation in IL-2-Deficient Mice
Björn R. Lúdvíksson, Rolf O. Ehrhardt, and Warren Strober

3629 Vδ1 T Cells Expanded in the Blood Throughout HIV Infection Display a Cytotoxic Activity and Are Primed for TNF-α and IFN-γ Production but Are Not Selected in Lymph Nodes
Séverine Boullier, Gilles Dadaglio, Alain Lafeuillade, Thierry Debord, and Marie-Lise Gougeon

3638 Intranasal Immunization of a DNA Vaccine with IL-12- and Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF)-Expressing Plasmids in Liposomes Induces Strong Mucosal and Cell-Mediated Immune Responses Against HIV-1 Antigens
Eiichi Okada, Shin Sasaki, Norihisa Ishii, Ichiro Aoki, Tatsuji Yasuda, Kusuya Nishioka, Jun Fukushima, Junichi Miyazaki, Britta Wahren, and Kenji Okuda

3648 HIV-1 Reverse Transcriptase-Specific CTL Against Conserved Epitopes Do Not Protect Against Progression to AIDS
Sjoerd H. van der Burg, Michèl R. Klein, Oscar Pontesilli, Agnes M. Holwerda, Jan-Wouter Drijfhout, W. Martin Kast, Frank Miedema, and Cornelis J. M. Melief

3655 HLA-Cw3 Expression on Porcine Endothelial Cells Protects Against Xenogeneic Cytotoxicity Mediated by a Subset of Human NK Cells
Jörg D. Seebach, Christopher Comrack, Sharon Germana, Christian LeGuern, David H. Sachs, and Harout DerSimonian

3662 Autoantibodies to IA-2 and IA-2β in Insulin-Dependent Diabetes Mellitus Recognize Conformational Epitopes: Location of the 37- and 40-kDa Fragments Determined
Hong Xie, Baowei Zhang, Yasunobu Matsumoto, Qing Li, Abner L. Notkins, and Michael S. Lan

3668 Author Index

VOLUME 159 / Nº 8 / OCTOBER 15, 1997

CUTTING EDGE

3675 A Synthetic Peptide Administered with IL-12 Elicits Immunity to *Listeria monocytogenes*
Mark A. Miller, Marianne J. Skeen, and H. Kirk Ziegler

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

3681 Nuclear Localization of RelB Is Associated with Effective Antigen-Presenting Cell Function
Allison R. Pettit, Christopher Quinn, Kelli P. A. MacDonald, Lois L. Cavanagh, Greg Thomas, Wendy Townsend, Malcolm Handel, and Ranjeny Thomas

3692 $CD4^+$ Th2 Cells Specific for Mycobacterial 65-Kilodalton Heat Shock Protein Protect Against Pristane-Induced Arthritis
Jonathan T. Beech, L. Khai Siew, Mahmood Ghoraishian, Lisa M. Stasiuk, Christopher J. Elson, and Stephen J. Thompson

3698 Specificity for In Vivo Graft Prolongation in γδ T Cell $Receptor^+$ Hybridomas Derived From Mice Given Portal Vein Donor-Specific Preimmunization and Skin Allografts
Reginald M. Gorczynski, Zhiqi Chen, Hua Zeng, and Xin Ming Fu

3707 Intracellular Routes and Selective Retention of Antigens in Mildly Acidic Cathepsin D/Lysosome-Associated Membrane Protein-1/MHC Class II-Positive Vesicles in Immature Dendritic Cells
Manfred B. Lutz, Patrizia Rovere, Monique J. Kleijmeer, Maria Rescigno, Caroline U. Aßmann, Viola M. J. Oorschot, Hans. J. Geuze, Jeannine Trucy, Denis Demandolx, Jean Davoust, and Paola Ricciardi-Castagnoli

3717 In Vitro and In Vivo Evidence for High Frequency of $I\text{-}A^b$-Reactive $CD4^+$ T Cells in HLA-DQ or HLA-DRA Transgenic Mice Lacking Endogenous MHC Class I and/or Class II Expression
Tatsuro Ishimoto, Ken Yamamoto, Yoshinori Fukui, Yasuhiko Fukuda, Kiyohiko Dohi, and Takehiko Sasazuki

3723 Phenotypic and Cytokine Analysis of Human Peripheral Blood γδ T Cells Expressing NK Cell Receptors
Luca Battistini, Giovanna Borsellino, Gregory Sawicki, Fabrizio Poccia, Marco Salvetti, Giovanni Ristori, and Celia F. Brosnan

3731 IL-4 and IL-13 Production in Differentiated T Helper Type 2 Cells Is Not IL-4 Dependent
Hua Huang, Jane Hu-Li, Hangjiong Chen, S. Z. Ben-Sasson, and William E. Paul

3739 In Vivo Association of CD5 with Tyrosine-Phosphorylated ZAP-70 and p21 Phospho-ζ Molecules in Human $CD3^+$ Thymocytes
Hélène Gary-Gouy, Valérie Lang, Sukhena Sarun, Laurence Boumsell, and Georges Bismuth

3748 The Epithelial Cell-Specific Integrin, CD103 (α^E Integrin), Defines a Novel Subset of Alloreactive $CD8^+$CTL
Gregg A. Hadley, Stephen T. Bartlett, Charles S. Via, Elena A. Rostapshova, and Sina Moainie

3757 The Functional Role of B Cell Antigen Receptor Stimulation and IL-4 in the Generation of Human Memory B Cells from Germinal Center B Cells
Jongseon Choe, Han-Soo Kim, Richard J. Armitage, and Yong Sung Choi

3767 Selective Binding of shc-SH2 Domain to Tyrosine-Phosphorylated ζ- but Not γ-Chain upon CD16 Ligation on Human NK Cells
Ricciarda Galandrini, Gabriella Palmieri, Rossella Paolini, Mario Piccoli, Luigi Frati, and Angela Santoni

3774 Signal Transduction for Melatonin in Human Lymphocytes: Involvement of a Pertussis Toxin-Sensitive G Protein
Antonio García-Pergañeda, David Pozo, Juan M. Guerrero, and Juan R. Calvo

3782 The Affinity Threshold for Human B Cell Activation Via the Antigen Receptor Complex is Reduced Upon Co-Ligation of the Antigen Receptor with CD21 (CR2)
Patricia K. A. Mongini, Maria A. Vilensky, Patricia F. Highet, and John K. Inman

3792 HLA Class II-Induced Translocation of PKCα and PKCβII Isoforms Is Abrogated Following Truncation of DRβ Cytoplasmic Domains
Tina Rich, Sean E. Lawler, Janet M. Lord, Vincent M. Blancheteau, Dominique J. Charron, and Nuala A. Mooney

3799 CD9-Mediated Costimulation of TCR-Triggered Naive T Cells Leads to Activation Followed by Apoptosis
Xu-Guang Tai, Kazuhito Toyooka, Yumi Yashiro, Ryo Abe, Cheung-Seog Park, Toshiyuki Hamaoka, Michiko Kobayashi, Steven Neben, and Hiromi Fujiwara

3808 Costimulatory Signals Through B7.1/CD28 Prevent T Cell Apoptosis During Target Cell Lysis
Peter T. Daniel, Arne Kroidl, Sophie Cayeux, Ralf Bargou, Thomas Blankenstein, and Bernd Dörken

3816 Maintenance of Clonotype Specificity in CD95/Apo-1/Fas-Mediated Apoptosis of Mature T Lymphocytes
Felicita Hornung, Lixin Zheng, and Michael J. Lenardo

3823 Calcium Ionophore-Treated Peripheral Blood Monocytes and Dendritic Cells Rapidly Display Characteristics of Activated Dendritic Cells
Brian J. Czerniecki, Charles Carter, Licia Rivoltini, Gary K. Koski, Hyun I. Kim, David E. Weng, James G. Roros, Yasmine M. Hijazi, Shuwen Xu, Steven A. Rosenberg, and Peter A. Cohen

3838 Expression and Function of OX40 Ligand on Human Dendritic Cells
Yusei Ohshima, Yuetsu Tanaka, Hideki Tozawa, Yoshiaki Takahashi, Charles Maliszewski, and Guy Delespesse

MOLECULAR AND STRUCTURAL IMMUNOLOGY

3849 Cell Type-Specific Glycoforms of FcγRIIIa (CD16): Differential Ligand Binding
Jeffrey C. Edberg and Robert P. Kimberly

3858 Human CD38, a Leukocyte Receptor and Ectoenzyme, Is a Member of a Novel Eukaryotic Gene Family of Nicotinamide Adenine Dinucleotide$^+$-Converting Enzymes: Extensive Structural Homology With the Genes for Murine Bone Marrow Stromal Cell Antigen 1 and Aplysian ADP-Ribosyl Cyclase
Enza Ferrero and Fabio Malavasi

3866 Clonal Expansions of B Lymphocytes in Old Mice
Joël LeMaoult, Sylvie Delassus, Ruben Dyall, Janko Nikolić-Žugić, Philippe Kourilsky, and Marc E. Weksler

3875 Molecular Basis of HLA-C Recognition by p58 Natural Killer Cell Inhibitory Receptors
Jongsun Kim, Yong Joon Chwae, Mi Yeon Kim, In Hong Choi, Jeon Han Park, and Se Jong Kim

3883 Bovine IgG Repertoire Is Dominated by a Single Diversified V_H Gene Family
M. Catherine Sinclair, Janice Gilchrist, and Robert Aitken

3890 Autoantibodies in Mice Lacking Terminal Deoxynucleotidyl Transferase: Evidence for a Role of N Region Addition in the Polyreactivity and in the Affinities of Anti-DNA Antibodies
Sandra Weller, Carmen Conde, Anne-Marie Knapp, Honey Levallois, Susan Gilfillan, Jean-Louis Pasquali, and Thierry Martin

3899 Formation of a Regulatory Factor X/X2 Box-Binding Protein/Nuclear Factor-Y Multiprotein Complex on the Conserved Regulatory Regions of HLA Class II Genes
Pascale Louis-Plence, Carlos S. Moreno, and Jeremy M. Boss

HOST DEFENSE

3910 A Ligand for Human CD48 on Epithelial Cells
Christopher J. Ianelli, Clark M. Edson, and David A. Thorley-Lawson

INFLAMMATION

3921 Molecular Regulation of IL-6 Activation by Asbestos in Lung Epithelial Cells: Role of Reactive Oxygen Species
Petia P. Simeonova, Wataru Toriumi, Choudari Kommineni, Muge Erkan, Albert E. Munson, William N. Rom, and Michael I. Luster

3929 P-Selectin, L-Selectin, and α_4 Integrin Have Distinct Roles in Eosinophil Tethering and Arrest on Vascular Endothelial Cells Under Physiological Flow Conditions
Joji Kitayama, Robert C. Fuhlbrigge, Kamal D. Puri, and Timothy A. Springer

3940 Cross-Linking of Fcγ Receptor IIa and Fcγ Receptor IIIb Induces Different Proadhesive Phenotypes on Human Neutrophils
Markus Kocher, Michelle E. Siegel, Jeffrey C. Edberg, and Robert P. Kimberly

3949 Cytokines Promote Glomerular Mesangial Cell Survival In Vitro by Stimulus-Dependent Inhibition of Apoptosis
Andrew Mooney, Timothy Jobson, Rachel Bacon, Masanori Kitamura, and John Savill

3961 IL-18 Accounts for Both TNF-α- and Fas Ligand-Mediated Hepatotoxic Pathways in Endotoxin-Induced Liver Injury in Mice
Hiroko Tsutsui, Kiyoshi Matsui, Norifumi Kawada, Yasuko Hyodo, Nobuki Hayashi, Haruki Okamura, Kazuya Higashino, and Kenji Nakanishi

3968 Role of $\alpha_L\beta_2$ Integrin Avidity in Transendothelial Chemotaxis of Mononuclear Cells
Christian Weber, Cha-Fen Lu, Jose M. Casasnovas, and Timothy A. Springer

3976 In Vivo Inhibition of Nuclear Factor-κB Activation Prevents Inducible Nitric Oxide Synthase Expression and Systemic Hypotension in a Rat Model of Septic Shock
Shu Fang Liu, Xiaobing Ye, and Asrar B. Malik

3984 Binding of the Epstein-Barr Virus to Human Platelets Causes the Release of Transforming Growth Factor-β
Ali Ahmad and José Menezes

3989 IFN-γ Inhibits Double-Stranded RNA-Induced E-Selectin Expression in Human Endothelial Cells
Tatjana R. Faruqi and Paul E. DiCorleto

3995 Erythromycin A-Derived Macrolides Modify the Functional Activities of Human Neutrophils by Altering the Phospholipase D-Phosphatidate Phosphohydrolase Transduction Pathway: L-Cladinose Is Involved Both in Alterations of Neutrophil Functions and Modulation of This Transductional Pathway
Houria Abdelghaffar, Doina Vazifeh, and Marie-Thérèse Labro

4006 Fas (CD95, APO-1) Antigen Expression and Function in Murine Mast Cells
Karin Hartmann, Amy L. Wagelie-Steffen, Esther von Stebut, and Dean D. Metcalfe

4015 Differential Regulation of Mast Cell Function by IL-10 and Stem Cell Factor
Tong-Jun Lin and A. Dean Befus

4024 Attenuation of IL-5-Mediated Signal Transduction, Eosinophil Survival, and Inflammatory Mediator Release by a Soluble Human IL-5 Receptor
Joseph Monahan, Ned Siegel, Robert Keith, Maire Caparon, Lori Christine, Robert Compton, Sheri Cusik, Jeffrey Hirsch, Michiko Huynh, Catherine Devine, Joseph Polazzi, Shaukat Rangwala, Bieshung Tsai, and Joseph Portanova

4035 Bispecific Monoclonal Antibody Complexes Facilitate Erythrocyte Binding and Liver Clearance of a Prototype Particulate Pathogen in a Monkey Model
Ronald P. Taylor, Edward N. Martin, Michele L. Reinagel, Alessandra Nardin, Maria Craig, Quincy Choice, Ryan Schlimgen, Stephen Greenbaum, Nino L. Incardona, and Hans D. Ochs

4045 The Ligand Binding Site of the Formyl Peptide Receptor Maps in the Transmembrane Region
Heini M. Miettinen, John S. Mills, Jeannie M. Gripentrog, Edward A. Dratz, Bruce L. Granger, and Algirdas J. Jesaitis

CLINICAL IMMUNOLOGY

4056 Modulation of Antigen-Induced B and T Cell Responses by Antigen-Specific IgE Antibodies
Akihiro Oshiba, Eckard Hamelmann, Angela Haczku, Katsuyuki Takeda, Daniel H. Conrad, Hitoshi Kikutani, and Erwin W. Gelfand

4064 Depletion of $CD8^+$ T Lymphocytes by Murine Monoclonal CD8 Antibodies and Restored Specific T Cell Proliferation In Vivo in a Patient with Chronic Hepatitis C
Stefan Kiefersauer, Christian Reiter, Josef Eisenburg, Helmut Michael Diepolder, Ernst P. Rieber, Gert Riethmüller, and Rudolf Gruber

4072 The Association of HLA-DR Alleles and T Cell Activation with Allergic Bronchopulmonary Aspergillosis
Bela Chauhan, Luis Santiago, Dawn A. Kirschmann, Vera Hauptfeld, Alan P. Knutsen, Patricia S. Hutcheson, Susan L. Woulfe, Raymond G. Slavin, Howard J. Schwartz, and Clifford J. Bellone

4077 Activation of Monocytes by HIV-Tat Treatment Is Mediated by Cytokine Expression
Robert M. Lafrenie, Larry M. Wahl, Jay S. Epstein, Kenneth M. Yamada, and Subhash Dhawan

4084 Role of Passenger Leukocytes in Allograft Rejection: Effect of Depletion of Donor Alveolar Macrophages on the Local Production of TNF-α, T Helper 1/T Helper 2 Cytokines, IgG Subclasses, and Pathology in a Rat Model of Lung Transplantation
Yasuo Sekine, Linda K. Bowen, Kathleen M. Heidler, Nico Van Rooijen, John W. Brown, Oscar W. Cummings, and David S. Wilkes

4094 Dual Role of IL-12 in Early and Late Stages of Murine Collagen Type II Arthritis
Leo A. B. Joosten, Erik Lubberts, Monique M. A. Helsen, and Wim B. van den Berg

4103 Streptococcal Cell Wall-Induced Arthritis: Requirements for Neutrophils, P-Selectin, Intercellular Adhesion Molecule-1, and Macrophage-Inflammatory Protein-2
Ralph C. Schimmer, Denis J. Schrier, Craig M. Flory, James Dykens, David K.-L. Tung, Peer B. Jacobson, Hans P. Friedl, Mary Carol Conroy, Beatrice Beck Schimmer, and Peter A. Ward

4109 Regulation of Nuclear Factor-κB and Its Inhibitor IκB-α/MAD-3 in Monocytes by *Mycobacterium tuberculosis* and During Human Tuberculosis
Zahra Toossi, Beverly D. Hamilton, Manijeh H. Phillips, Lynn E. Averill, Jerrold J. Ellner, and Anupama Salvekar

4117 Up-Regulation of Fas and the Costimulatory Molecules B7-1 and B7-2 on Peripheral Lymphocytes in Autoimmune B6/*gld* Mice
Jory P. Weintraub, Robert A. Eisenberg, and Philip L. Cohen

4127 Letter to the Editor

4128 Author Index

VOLUME 159 / Nº 9 / NOVEMBER 1, 1997

4137 Editorial: Manuscript Reviews for *The Journal of Immunology*

CUTTING EDGE

4139 Ig Sγ3 DNA-Specific Double Strand Breaks Are Induced in Mitogen-Activated B Cells and Are Implicated in Switch Recombination
Robert A. Wuerffel, Jian Du, Rebecca J. Thompson, and Amy L. Kenter

4145 The PU.1 Binding Site Is a *cis*-Element That Regulates Pro-B/Pre-B Specificity of Vκ-Jκ Joining
Reiko Hayashi, Toshitada Takemori, Masami Kodama, Misao Suzuki, Akio Tsuboi, Fumikiyo Nagawa, and Hitoshi Sakano

4150 Regulation of C-C Chemokine Production by Murine T Cells by CD28/B7 Costimulation
Kevan C. Herold, Jing Lu, Ingrid Rulifson, Vaiva Vezys, Dennis Taub, Michael J. Grusby, and Jeffrey A. Bluestone

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

4155 Effect of TGF-β1 on Cell Cycle Regulatory Proteins in LPS-Stimulated Normal Mouse B Lymphocytes
Caroline Bouchard, Wolf Herman Fridman, and Catherine Sautès

4165 Altered Peptide Ligands Trigger Perforin- Rather than Fas-Dependent Cell Lysis
Martin F. Bachmann, Toshiaki Ohteki, Kim McKall Faienza, Arsen Zakarian, David Kägi, Daniel E. Speiser, and Pamela S. Ohashi

4171 Stromal Cell Modulation of Negative Regulatory Signals That Influence Apoptosis and Proliferation of B Lineage Lymphocytes
Lisa A. Borghesi, Glennda Smithson, and Paul W. Kincade

4180 $CD4^+$ T Cells from IRF-1-Deficient Mice Exhibit Altered Patterns of Cytokine Expression and Cell Subset Homeostasis
David L. McElligott, Joy A. Phillips, Cathy A. Stillman, Rick J. Koch, Donald E. Mosier, and Monte V. Hobbs

4187 Differential Tyrosine Phosphorylation of Inhibitory Versus Activating Ly-49 Receptor Proteins and Their Recruitment of SHP-1 Phosphatase
Llewellyn H. Mason, Pierre Gosselin, Stephen K. Anderson, William E. Fogler, John R. Ortaldo, and Daniel W. McVicar

4197 Fas-Mediated Liver Damage in MRL Hemopoietic Chimeras Undergoing *lpr*-Mediated Graft-Versus-Host Disease
Pierre Bobé, Danielle Bonardelle, Michel Reynès, François Godeau, Jérôme Mahiou, Virginie Joulin, and Nicole Kiger

4205 Limits to the Differential Avidity Model of T Cell Selection in the Thymus
Cristina Girao, Qinghui Hu, Jiling Sun, and Philip G. Ashton-Rickardt

4212 Differential Effects of B7-1 Blockade in the Rat Experimental Autoimmune Encephalomyelitis Model
Lorenzo Gallon, Anil Chandraker, Shohreh Issazadeh, Robert Peach, Peter S. Linsley, Laurence A. Turka, Mohamed H. Sayegh, and Samia J. Khoury

4217 Distinct Roles for B7-1 and B7-2 Determinants During Priming of Effector $CD8^+$ Tc1 and Regulatory $CD4^+$ Th2 Cells for Contact Hypersensitivity
Hui Xu, Peter S. Heeger, and Robert L. Fairchild

4227 TCR-β Repertoire Development in the Mouse Embryo
Hideo Ema, Ana Cumano, and Philippe Kourilsky

4233 B Cell Antigen Receptor-Evoked Calcium Influx Is Enhanced in CD22-Deficient B Cell Lines
Monica J. S. Nadler, Paul A. McLean, Benjamin G. Neel, and Henry H. Wortis

4244 CD40-Mediated Signals Inhibit the Binding of TNF Receptor-Associated Factor 2 to the CD40 Cytoplasmic Domain
Amitabha Chaudhuri, Scott Orme, Sheerlee Eilam, and Bobby J. Cherayil

4252 Transgenic Expression of Lymphotoxin Restores Lymph Nodes to Lymphotoxin-α-Deficient Mice
Rosalba Sacca, Shannon Turley, Lynn Soong, Ira Mellman, and Nancy H. Ruddle

4261 Specific Resistance of T Cells to CD95-Induced Apoptosis During S Phase of the Cell Cycle
Tao Dao, James W. Huleatt, Ravi Hingorani, and I. Nicholas Crispe

4268 In Vivo Administration of *flt3* Ligand Markedly Stimulates Generation of Dendritic Cell Progenitors from Mouse Liver
Maureen L. Drakes, Lina Lu, Vladimir M. Subbotin, and Angus W. Thomson

4279 Regulation of B Cell Functions by C3a and $C3a^{desArg}$: Suppression of TNF-α, IL-6, and the Polyclonal Immune Response
Wolfgang H. Fischer and Tony E. Hugli

4287 Cellular Requirements for the Activation and Proliferation of Ruminant γδ T Cells
Catherine F. Hanrahan, Wayne G. Kimpton, Chris J. Howard, Keith R. Parsons, Malcolm R. Brandon, Arna E. Andrews, and Andrew D. Nash

4295 Activation and Migration of CD8 T Cells in the Intestinal Mucosa
Sung-Kwon Kim, Douglas S. Reed, William R. Heath, Francis Carbone, and Leo Lefrançois

4307 The Cytoplasmic Domain of CD5 Mediates Both TCR/CD3-Dependent and -Independent Diacylglycerol Production
María Simarro, Claudette Pelassy, Javier Calvo, Lourdes Places, Claude Aussel, and Francisco Lozano

4316 Reversal of Human Allergic T Helper 2 Responses by Engagement of Signaling Lymphocytic Activation Molecule
José M. Carballido, Gregorio Aversa, Keld Kaltoft, Benjamin G. Cocks, Juha Punnonen, Hans Yssel, Kristian Thestrup-Pedersen, and Jan E. de Vries

MOLECULAR AND STRUCTURAL IMMUNOLOGY

4322 Cloning and Analysis of the Promoter Region of CXCR4, a Coreceptor for HIV-1 Entry
Masako Moriuchi, Hiroyuki Moriuchi, Willie Turner, and Anthony S. Fauci

4330 Mechanism for Enhanced External Transfer of Dimeric IgA over Pentameric IgM: Studies of Diffusion, Binding to the Human Polymeric Ig Receptor, and Epithelial Transcytosis
Inger B. Natvig, Finn-Eirik Johansen, Tommy W. Nordeng, Guttorm Haraldsen, and Per Brandtzaeg

4341 Human T Cell Leukemias with Continuous V(D)J Recombinase Activity for TCR-δ Gene Deletion
Timo M. Breit, Martie C. M. Verschuren, Ingrid L. M. Wolvers-Tettero, Ellen J. Van Gastel-Mol, Karel Hählen, and Jacques J. M. van Dongen

4350 Induction of STAT Protein Signaling Through the CD40 Receptor in B Lymphocytes: Distinct STAT Activation Following Surface Ig and CD40 Receptor Engagement
James G. Karras, Zihua Wang, Li Huo, David A. Frank, and Thomas L. Rothstein

4356 Alteration of Glycosylation Renders HIV Sensitive to Inactivation by Normal Human Serum
Deborah J. Reed, Xinli Lin, Tim D. Thomas, Carl W. Birks, Jordan Tang, and Russell P. Rother

4362 Recombining Sequence Recombination in Normal κ-Chain-Expressing B Cells
Olga Dunda and Daniel Corcos

4367 Cloning and Expression of the Dog Mast Cell α-Chymase Gene
George H. Caughey, John L. Blount, Karen L. Koerber, Michael Kitamura, and Kenneth C. Fang

4376 Embryonic Stem Cell Lines from MRL Mice Allow Genetic Modification in a Murine Model of Autoimmune Disease
Jennifer L. Goulet, Cun-Yu Wang, and Beverly H. Koller

4382 Cloning and Characterization of the Human Recombination Activating Gene 1 (*RAG1*) and *RAG2* Promoter Regions
Ali A. Zarrin, Ivan Fong, Lilia Malkin, Philip A. Marsden, and Neil L. Berinstein

4395 The Orientation of a T Cell Receptor to Its MHC Class II:Peptide Ligands
Soon-cheol Hong, Derek B. Sant'Angelo, Bonnie N. Dittel, Ruslan Medzhitov, Sangwook Tim Yoon, P. Greg Waterbury, and Charles A. Janeway, Jr.

4403 Somatic Hypermutation: Mutations 3′ of Rabbit VDJ H-Chain Genes
Dennis K. Lanning and Katherine L. Knight

4408 Rigidification of the α_2 Helix of an MHC Class I Molecule by a Valine to Proline Mutation in Position 165 Does Not Prevent Peptide-Specific Antigen Presentation
Daniel Plaksin, Katarina Polakova, Michael G. Mage, and David H. Margulies

HOST DEFENSE

4415 T Cell Receptor-Mediated Signaling Is Defective in T Cells Obtained from Patients with Primary Intracranial Tumors
Lorri A. Morford, Lucinda H. Elliott, Sonia L. Carlson, William H. Brooks, and Thomas L. Roszman

4426 Syk-Independent Tyrosine Phosphorylation and Association of the Protein Tyrosine Phosphatases SHP-1 and SHP-2 with the High Affinity IgE Receptor
Teruaki Kimura, Juan Zhang, Kenji Sagawa, Kazuyasu Sakaguchi, Ettore Appella, and Reuben P. Siraganian

4435 Intracytoplasmic Delivery of Listeriolysin O by a Vaccinal Strain of *Bacillus anthracis* Induces CD8-Mediated Protection Against *Listeria monocytogenes*
Jean-Claude Sirard, Catherine Fayolle, Chantal de Chastellier, Michèle Mock, Claude Leclerc, and Patrick Berche

4444 The Surface Glycoproteins of *Trypanosoma cruzi* Encode a Superfamily of Variant T Cell Epitopes
Stuart J. Kahn and Monika Wleklinski

4452 Intracellular Fate of Vacuoles Containing *Toxoplasma gondii* Is Determined at the Time of Formation and Depends on the Mechanism of Entry
Dana G. Mordue and L. David Sibley

4460 B7-2 Blockade Enhances T Cell Responses to *Leishmania donovani*
Michaela L. Murphy, Christian R. Engwerda, Patricia M. A. Gorak, and Paul M. Kaye

4467 Parasite-Driven In Vitro Human Lymphocyte Cytotoxicity Against Autologous Infected Macrophages from Mucosal Leishmaniasis
Cláudia Ida Brodskyn, Aldina Barral, Viviane Boaventura, Edgar Carvalho, and Manoel Barral-Netto

4474 Reversal Reaction in Borderline Leprosy Is Associated with a Polarized Shift to Type 1-Like *Mycobacterium leprae* T Cell Reactivity in Lesional Skin: A Follow-Up Study
Claudia E. Verhagen, Eddy A. Wierenga, Anita A. M. Buffing, Mohamed A. Chand, William R. Faber, and Pranab K. Das

INFLAMMATION

4484 TGF-β Induced by Oral Tolerance Ameliorates Experimental Tracheal Eosinophilia
Kanna Haneda, Kunio Sano, Gen Tamura, Takehiko Sato, Sonoko Habu, and Kunio Shirato

4491 Activation of $p38^{mapk}$, MKK3, and MKK4 by TNF-α in Mouse Bone Marrow-Derived Macrophages
Brent W. Winston, Edward D. Chan, Gary L. Johnson, and David W. H. Riches

4498 Sensitive Responses of Leukocytes to Lipopolysaccharide Require a Protein Distinct from CD14 at the Cell Surface
Thierry Vasselon, Rossitza Pironkova, and Patricia A. Detmers

4506 Mechanism of Suppression of Macrophage Nitric Oxide Release by IL-13: Influence of the Macrophage Population
Christian Bogdan, Heike Thüring, Margit Dlaska, Martin Röllinghoff, and Günter Weiss

4514 Differential Roles of Selectins and the α_4-Integrin in Acute, Subacute, and Chronic Leukocyte Recruitment In Vivo
Brent Johnston, Ulrike M. Walter, Andrew C. Issekutz, Thomas B. Issekutz, Donald C. Anderson, and Paul Kubes

4524 The Fate of Pro-TNF-α Following Inhibition of Metalloprotease-Dependent Processing to Soluble TNF-α in Human Monocytes
Kimberly A. Solomon, Maryanne B. Covington, Carl P. DeCicco, and Robert C. Newton

4532 TNF-α and IL-4 Synergistically Increase Vascular Cell Adhesion Molecule-1 Expression in Cultured Vascular Smooth Muscle Cells
Jennifer L. Barks, Jay J. McQuillan, and Michael F. Iademarco

4539 Distinct $CD4^+$ T Cell Helper Requirements in *Theileria parva*-Immune and -Naive Bovine CTL Precursors
Evans L. N. Taracha, Elias Awino, and Declan J. McKeever

4546 Expression of Vascular Cell Adhesion Molecule-1 by Vascular Endothelial Cells in Immune and Nonimmune Inflammatory Reactions in the Skin
Andrew A. Harrison, Claire J. Stocker, Peter T. Chapman, Yvonne T. Tsang, Tanya Y. Huehns, Robert H. Gundel, A. Mike Peters, Kevin A. Davies, Andrew J. George, Martyn K. Robinson, and Dorian O. Haskard

4555 Comparison of Tethering and Rolling of Eosinophils and Neutrophils Through Selectins and P-Selectin Glycoprotein Ligand-1
Kamala D. Patel and Rodger P. McEver

4566 Synergy Between L-Selectin Signaling and Chemotactic Activation During Neutrophil Adhesion and Transmigration
Yvonne T. M. Tsang, Sriram Neelamegham, Yu Hu, Ellen L. Berg, Alan R. Burns, C. Wayne Smith, and Scott I. Simon

CLINICAL IMMUNOLOGY

4580 CD40 Ligand Expressed on B Cells in the BXSB Mouse Model of Systemic Lupus Erythematosus
Sarah Blossom, Elton B. Chu, William O. Weigle, and Kathleen M. Gilbert

4587 Regulation of Anti-HIV-1 Activity of RANTES by Heparan Sulfate Proteoglycans
Tamas Oravecz, Marina Pall, Jinhai Wang, Gregory Roderiquez, Mary Ditto, and Michael A. Norcross

4593 Increased Expression of Eotaxin in Bronchoalveolar Lavage and Airways of Asthmatics Contributes to the Chemotaxis of Eosinophils to the Site of Inflammation
Bouchaib Lamkhioued, Paolo M. Renzi, Sylvie Abi-Younes, Eduardo A. Garcia-Zepada, Z. Allakhverdi, Omar Ghaffar, Marc E. Rothenberg, Andrew D. Luster, and Qutayba Hamid

4602 Myelin Protein Expression Is Increased in Lymph Nodes of Mice with Relapsing Experimental Autoimmune Encephalomyelitis
Allan J. MacKenzie-Graham, Thomas M. Pribyl, Sookhyun Kim, Verna R. Porter, Anthony T. Campagnoni, and Rhonda R. Voskuhl

4611 Skin-Homing, CLA^+ Memory T Cells Are Activated in Atopic Dermatitis and Regulate IgE by an IL-13-Dominated Cytokine Pattern: IgG4 Counter-Regulation by CLA^- Memory T Cells
Mübeccel Akdis, Cezmi A. Akdis, Lorenz Weigl, Reiner Disch, and Kurt Blaser

4620 CD40 Ligand-CD40 Interactions Are Necessary for the Initiation of Insulitis and Diabetes in Nonobese Diabetic Mice
Balaji Balasa, Troy Krahl, Gail Patstone, Jae Lee, Roland Tisch, Hugh O. McDevitt, and Nora Sarvetnick

4628 Fas Ligand Expression and Function in Systemic Lupus Erythematosus
Jeremy McNally, Dae-Hyun Yoo, Jörn Drappa, Jai-Li Chu, Hideo Yagita, Steven M. Friedman, and Keith B. Elkon

4637 Author Index

VOLUME 159 / Nº 10 / NOVEMBER 15, 1997

PRESIDENTIAL ADDRESS

4645 American Association of Immunologists Presidential Address: Doing it Together: A Perspective on the Process of Experimental Science
Katherine L. Knight

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

4653 New Evidence for Two MHC Class II-Restricted Antigen Presentation Pathways by Overexpression of a Small G Protein
Volker Briken, Danielle Lankar, and Christian Bonnerot

4659 Induction of Procoagulant Function in Porcine Endothelial Cells by Human Natural Killer Cells
Anatoli M. Malyguine, Soheyla Saadi, Robert A. Holzknecht, Christian P. Patte, Nitin Sud, Jeffrey L. Platt, and Jeffrey R. Dawson

4665 Antigen Recognition and Allogeneic Tumor Rejection in $CD8^+$ TCR Transgenic/$RAG^{-/-}$ Mice
Thomas C. Manning, Laurie A. Rund, Meegan M. Gruber, Francesca Fallarino, Thomas F. Gajewski, and David M. Kranz

4676 Transcriptional Regulation of the *junB* Gene in B Lymphocytes: Role of Protein Kinase A and a Membrane Ig-Regulated Protein Phosphatase
Stephen F. Amato, Koichi Nakajima, Toshio Hirano, and Thomas C. Chiles

4686 IL-4 Prevents Insulitis and Insulin-Dependent Diabetes Mellitus in Nonobese Diabetic Mice by Potentiation of Regulatory T Helper-2 Cell Function
Mark J. Cameron, Guillermo A. Arreaza, Peter Zucker, Stephen W. Chensue, Robert M. Strieter, Subrata Chakrabarti, and Terry L. Delovitch

4693 Natural Processing Sites for Human Cathepsin E and Cathepsin D in Tetanus Toxin: Implications for T Cell Epitope Generation
Eric W. Hewitt, Achim Treumann, Nick Morrice, Peter J. Tatnell, John Kay, and Colin Watts

4700 Inhibition of CTL Induction by Rapamycin: IL-2 Rescues Granzyme B and Perforin Expression but Only Partially Restores Cytotoxic Activity
Andrew P. Makrigiannis and David W. Hoskin

4708 T Cells from Jak3-Deficient Mice Have Intact TCR Signaling, but Increased Apoptosis
Daniel C. Thomis, William Lee, and Leslie J. Berg

4720 Constitutive Activation of JAKs and STATs in BCR-Abl-Expressing Cell Lines and Peripheral Blood Cells Derived from Leukemic Patients
Sylvia K. Chai, Gwen L. Nichols, and Paul Rothman

4729 Proline-Rich Tyrosine Kinase-2 Activation by β_1 Integrin Fibronectin Receptor Cross-Linking and Association with Paxillin in Human Natural Killer Cells
Angela Gismondi, Lorenzo Bisogno, Fabrizio Mainiero, Gabriella Palmieri, Mario Piccoli, Luigi Frati, and Angela Santoni

4737 Impaired Peripheral Deletion of Activated T cells in Mice Lacking the Common Cytokine Receptor γ-Chain: Defective Fas Ligand Expression in γ-Chain-Deficient Mice
Hiroshi Nakajima and Warren J. Leonard

4745 The Effect of NK Cell Activation by Tumor Cells on Antigen-Specific Antibody Responses
Crystal Y. Koh and Dorothy Yuan

4753 Derivation of HLA-A11/K^b Transgenic Mice: Functional CTL Repertoire and Recognition of Human A11-Restricted CTL Epitopes
Jeff Alexander, Carla Oseroff, John Sidney, Peggy Wentworth, Elissa Keogh, Gary Hermanson, Francis V. Chisari, Ralph T. Kubo, Howard M. Grey, and Alessandro Sette

4762 $CD4^+CD8^+$ Thymocytes Are Preferentially Induced to Die Following CD45 Cross-linking, Through a Novel Apoptotic Pathway
Sylvie Lesage, Ann-Muriel Steff, Fabianne Philippoussis, Martin Pagé, Sébastien Trop, Véronique Mateo, and Patrice Hugo

4772 Induction of Tolerance by IL-10-Treated Dendritic Cells
Kerstin Steinbrink, Matthias Wölfl, Helmut Jonuleit, Jürgen Knop, and Alexander H. Enk

4781 β_2-Microglobulin-Deficient Mice Are Protected from Hypergammaglobulinemia and Have Defective Antibody Responses Because of Increased IgG Catabolism
Gregory J. Christianson, Warren Brooks, Sarah Vekasi, Elizabeth A. Manolfi, Jessica Niles, Shari L. Roopenian, John B. Roths, Robert Rothlein, and Derry C. Roopenian

4793 Induction of Parasite Antigen-Specific Antibody Responses in Unsensitized Human B Cells Is Dependent on the Presence of Cytokines After T Cell Priming
Olivier Garraud, Francine B. Perler, Jannette E. Bradley, and Thomas B. Nutman

4799 Expression of a Hypoglycosylated Form of CD86 (B7-2) on Human T Cells with Altered Binding Properties to CD28 and CTLA-4
Per Höllsberg, Christian Scholz, David E. Anderson, Edward A. Greenfield, Vijay K. Kuchroo, Gordon J. Freeman, and David A. Hafler

4806 $\alpha_4\beta_1$ Integrin-Mediated Tyrosine Phosphorylation in Human T Cells: Characterization of Crk- and Fyn-Associated Substrates (pp105, pp115, and Human Enhancer of Filamentation-1) and Integrin-Dependent Activation of $p59^{fyn}$
Anne J. Hunter and Yoji Shimizu

4815 Pivotal Role of Endogenous TNF-α in the Induction of Functional Inactivation and Apoptosis in NK Cells
Anahid Jewett, Marta Cavalcanti, and Benjamin Bonavida

4823 Kinase-Independent Potentiation of B Cell Antigen Receptor-Mediated Signal Transduction by the Protein Tyrosine Kinase Src
Jiejian Lin, Jiaxian Tao, Roy B. Dyer, Norbert K. Herzog, and Louis B. Justement

4834 Bcl-x Protects Primary B Cells Against Fas-Mediated Apoptosis
Thomas J. Schneider, Didier Grillot, Linda C. Foote, Gabriel E. Núñez, and Thomas L. Rothstein

4840 TNF-α Bifunctionally Induces Proliferation in Primary Hepatocytes: Role of Cell Anchorage and Spreading
Yoshifumi Watanabe, Hironori Osaki, and Toshihiro Akaike

4848 Expansion of Mature Thymocyte Subsets Before Emigration to the Periphery
Claude Pénit and Florence Vasseur

4857 Activated T Helper 1 and T Helper 2 Cells Differentially Express the β-2-Adrenergic Receptor: A Mechanism for Selective Modulation of T Helper 1 Cell Cytokine Production
D. Susanne Ramer-Quinn, Raymond A. Baker, and Virginia M. Sanders

MOLECULAR AND STRUCTURAL IMMUNOLOGY

4868 Bacterial Lipoprotein and Lipopolysaccharide Act Synergistically to Induce Lethal Shock and Proinflammatory Cytokine Production
Hongwei Zhang, Johnny W. Peterson, David W. Niesel, and Gary R. Klimpel

4879 A Gain of Novel Tissue Specificity in the Human Ly-6 Gene E48
Ruud H. Brakenhoff, Mirjam van Dijk, Ellen M. C. Rood-Knippels, and Gordon B. Snow

4887 Naturally Occurring A Pocket Polymorphism in HLA-B*2703 Increases the Dependence on an Accessory Anchor Residue at P1 for Optimal Binding of Nonamer Peptides
Thomas A. Griffin, Jie Yuan, Thomas Friede, Stefan Stevanovic, Koya Ariyoshi, Sarah L. Rowland-Jones, Hans-Georg Rammensee, and Robert A. Colbert

4898 Characterization of CD40 Signaling Determinants Regulating Nuclear Factor-κB Activation in B Lymphocytes
Yina Hsing, Bruce S. Hostager, and Gail A. Bishop

4907 Appropriate Developmental Expression of Human CD8β in Transgenic Mice
Lynda J. Kieffer, Lei Yan, Jeffrey H. Hanke, and Paula B. Kavathas

4913 A 150-Base Pair 5′ Region of the MHC Class I *HLA-B7* Gene Is Sufficient to Direct Tissue-Specific Expression and Locus Control Region Activity: The α Site Determines Efficient Expression and In Vivo Occupancy at Multiple *cis*-Active Sites Throughout This Region
Michelle M. Kushida, Anup Dey, Xiao-Li Zhang, Jodie Campbell, Matthew Heeney, James Carlyle, Subinay Ganguly, Keiko Ozato, Haren Vasavada, and John W. Chamberlain

4930 Evidence That *Tmevd2* and *eae3* May Represent Either a Common Locus or Members of a Gene Complex Controlling Susceptibility to Immunologically Mediated Demyelination in Mice
Cory Teuscher, Dominic M. Rhein, Kevin D. Livingstone, Randi A. Paynter, R. W. Doerge, Simone M. Nicholson, and Roger W. Melvold

4935 HLA-DP2: Self Peptide Sequences and Binding Properties
Roman M. Chicz, Daniel F. Graziano, Massimo Trucco, Jack L. Strominger, and Joan C. Gorga

4943 Autoantigen Recognition by Human CD8 T Cell Clones: Enhanced Agonist Response Induced by Altered Peptide Ligands
Alexander Dressel, Jonathan L. Chin, Alessandro Sette, Rudolf Gausling, Per Höllsberg, and David A. Hafler

4952 The Neuropeptide Substance P Activates Transcription Factor NF-κB and κB-Dependent Gene Expression in Human Astrocytoma Cells
Klaus Lieb, Bernd L. Fiebich, Mathias Berger, Joachim Bauer, and Klaus Schulze-Osthoff

4959 Characterization of Murine CD70, the Ligand of the TNF Receptor Family Member CD27
Kiki Tesselaar, Loes A. Gravestein, Gijs M. W. van Schijndel, Jannie Borst, and René A. W. van Lier

HOST DEFENSE

4966 Enhancement of Natural Killer Cell Cytotoxicity by the Human Herpesvirus-7 Via IL-15 Induction
Blanche Ngola Atedzoe, Ali Ahmad, and José Menezes

4973 Cultured Blood Dendritic Cells Retain HIV-1 Antigen-Presenting Capacity for Memory CTL During Progressive HIV-1 Infection
Zheng Fan, Xiao-Li Huang, Lian Zheng, Cara Wilson, LuAnn Borowski, James Liebmann, Phalguni Gupta, Joseph Margolick, and Charles Rinaldo

4983 Alteration of Macrophage Function by a *Trypanosoma cruzi* Membrane Mucin
Juana de Diego, Carmen Punzón, Marina Duarte, and Manuel Fresno

4990 Natural Killer Cell Cytokine Production, Not Cytotoxicity, Contributes to Resistance Against Blood-Stage *Plasmodium chabaudi* AS Infection
Karkada Mohan, Pierre Moulin, and Mary M. Stevenson

4999 Costimulation Provided by DNA Immunization Enhances Antitumor Immunity
Maripat Corr, Helen Tighe, Delphine Lee, Jean Dudler, May Trieu, Diana C. Brinson, and Dennis A. Carson

5005 SCID Mice Reconstituted with IL-4-Deficient Lymphocytes, but Not Immunocompetent Lymphocytes, Are Resistant to Cutaneous Leishmaniasis
Abhay Satoskar, Frank Brombacher, Wen J. Dai, Ian McInnes, Foo Y. Liew, James Alexander, and William Walker

5014 Analysis of Granuloma Formation in Double Cytokine-Deficient Mice Reveals a Central Role for IL-10 in Polarizing Both T Helper Cell 1- and T Helper Cell 2-Type Cytokine Responses In Vivo
Thomas A. Wynn, Renate Morawetz, Tanya Scharton-Kersten, Sara Hieny, Herbert C. Morse III, Ralf Kühn, Werner Müller, Allen W. Cheever, and Alan Sher

5024 *Leishmania major*-Infected C3H Mice Treated with Anti-IL-12 mAb Develop but Do Not Maintain a Th2 Response
Brian D. Hondowicz, Tanya M. Scharton-Kersten, Douglas E. Jones, and Phillip Scott

INFLAMMATION

5032 Treatment of a Newly Established Transgenic Model of Chronic Arthritis with Nondepleting Anti-CD4 Monoclonal Antibody
Claudia Mauri, Cong-Qui Q. Chu, David Woodrow, Lucia Mori, and Marco Londei

5042 Hamycin Inhibits IL-8-Induced Biologic Response by Modulating Its Receptor in Human Polymorphonuclear Neutrophils
Sunil K. Manna, Susmita Samanta, and Ajoy K. Samanta

5053 Lymphocytes Mediate TNF-α-Induced Endothelial Cell Adhesion Molecule Expression: Studies on *SCID* and *RAG*-1 Mutant Mice
Yoshinori Horie, Robert P. Chervenak, Robert Wolf, Mary E. Gerritsen, Donald C. Anderson, Shunichiro Komatsu, and D. Neil Granger

5063 Macrophage Inflammatory Protein-1α Production in Lipopolysaccharide-Stimulated Human Adherent Blood Mononuclear Cells Is Inhibited by the Nitric Oxide Synthase Inhibitor N^G-Monomethyl-L-Arginine
Heiko Mühl and Charles A. Dinarello

5070 Formyl Peptide Receptors Are Coupled to Multiple Mitogen-Activated Protein Kinase Cascades by Distinct Signal Transduction Pathways: Role in Activation of Reduced Nicotinamide Adenine Dinucleotide Oxidase
Madhavi J. Rane, Stephen L. Carrithers, John M. Arthur, Jon B. Klein, and Kenneth R. McLeish

5079 Two Functionally Independent Pathways for Lipopolysaccharide-Dependent Activation of Mouse Peritoneal Macrophages
Claudia R. Amura, Li-Chun Chen, Nobuyuki Hirohashi, Mei-Guey Lei, and David C. Morrison

5084 Mechanical Deformation Promotes Secretion of IL-1α and IL-1 Receptor Antagonist
Richard T. Lee, William H. Briggs, George C. Cheng, Heidi B. Rossiter, Peter Libby, and Thomas Kupper

5089 Lipocortin 1 Protects Against Splanchnic Artery Occlusion and Reperfusion Injury by Affecting Neutrophil Migration
Salvatore Cuzzocrea, Anitaben Tailor, Basilia Zingarelli, Andrew L. Salzman, Roderick J. Flower, Csaba Szabó, and Mauro Perretti

CLINICAL IMMUNOLOGY

5100 Mercuric Chloride-Induced Vasculitis in the Brown Norway Rat: αβ T Cell-Dependent and -Independent Phases: Role of the Mast Cell
Patrick D. W. Kiely, Israel Pecht, and David B. G. Oliveira

5107 Inhibitory Effects of Chronic Ethanol Consumption on Cellular Immune Responses to Hepatitis C Virus Core Protein Are Reversed by Genetic Immunizations Augmented with Cytokine-Expressing Plasmids
Michael Geissler, Annett Gesien, and Jack R. Wands

5114 Human Monoclonal Antibodies to the V3 Loop of HIV-1 With Intra- and Interclade Cross-Reactivity
Miroslaw K. Gorny, Thomas C. VanCott, Catarina Hioe, Zimra R. Israel, Nelson L. Michael, Anthony J. Conley, Constance Williams, Joseph A. Kessler II, Padmasree Chigurupati, Sherri Burda, and Susan Zolla-Pazner

5123 CD28 Costimulation Increases $CD8^+$ Cell Suppression of HIV Replication
Edward Barker, Katharine N. Bossart, Sue H. Fujimura, and Jay A. Levy

5132 Nitric Oxide Accelerates the Onset and Increases the Severity of Experimental Autoimmune Uveoretinitis Through an IFN-γ-Dependent Mechanism
Sharon Hoey, Peter S. Grabowski, Stuart H. Ralston, John V. Forrester, and Janet Liversidge

5143 T Cell Clonality in Synovial Fluid of a Patient With Rheumatoid Arthritis: Persistent but Fluctuant Oligoclonal T Cell Expansions
Tomohiro Kato, Manae Kurokawa, Kayo Masuko-Hongo, Hiroko Sasakawa, Taichi Sekine, Shinichiro Ueda, Kazuhiko Yamamoto, and Kusuki Nishioka

5150 Recombinant T Cell Receptor Molecules Can Prevent and Reverse Experimental Autoimmune Encephalomyelitis: Dose Effects and Involvement of Both CD4 and CD8 T Cells
Vipin Kumar, Eric Coulsell, Bertram Ober, Greg Hubbard, Eli Sercarz, and E. Sally Ward

5157 Inhibition of IL-12 Production by Thalidomide
David R. Moller, Maria Wysocka, Brian M. Greenlee, Xiaojing Ma, Larry Wahl, David A. Flockhart, Giorgio Trinchieri, and Christopher L. Karp

5162 Comparison of HIV-1 Envelope-Specific $CD4^+$ T Cell Lines Simultaneously Established from Peripheral Blood Mononuclear Cells and Lymph Node Biopsy in HIV-1-Infected Individuals
Silvia Ratto-Kim, Karl V. Sitz, Aimée M. Scherer, Jerome H. Kim, David W. Anderson, Martin E. Nau, Dean L. Mann, Pradip N. Akolkar, Beena Gulwani-Akolkar, Jack Silver, and Deborah L. Birx

5168 Prevention of Immunotoxin-Induced Immunogenicity by Coadministration with CTLA4Ig Enhances Antitumor Efficacy
Clay B. Siegall, Helen G. Haggerty, Garvin L. Warner, Dana Chace, Bruce Mixan, Peter S. Linsley, and Thomas Davidson

5174 Author Index

VOLUME 159 / Nº 11 / DECEMBER 1, 1997

CUTTING EDGE

5183 Calcitonin Gene-Related Peptide Is Necessary for Ultraviolet B-Impaired Induction of Contact Hypersensitivity
Hironori Niizeki, Pascale Alard, and J. Wayne Streilein

5187 Immunosuppressive Effects of Human CTLA4Ig in a Non-Human Primate Model of Allogeneic Pancreatic Islet Transplantation
Matteo G. Levisetti, Philip A. Padrid, Gregory L. Szot, Naveen Mittal, Shane M. Meehan, Craig L. Wardrip, Gary S. Gray, David S. Bruce, J. R. Thistlethwaite, Jr., and Jeffrey A. Bluestone

5192 A Family of Human Lymphoid and Myeloid Ig-Like Receptors, Some of Which Bind to MHC Class I Molecules
Luis Borges, Mei-Ling Hsu, Neil Fanger, Marek Kubin, and David Cosman

5197 $CD8^+$ T Cells Clear Influenza Virus by Perforin or Fas-Dependent Processes
David J. Topham, Ralph A. Tripp, and Peter C. Doherty

5201 Molecular Cloning of Leukotactin-1: A Novel Human β-Chemokine, a Chemoattractant for Neutrophils, Monocytes, and Lymphocytes, and a Potent Agonist at CC Chemokine Receptors 1 and 3
Byung-S. Youn, Shang M. Zhang, Eun K. Lee, Doo H. Park, Hal E. Broxmeyer, Philip M. Murphy, Massimo Locati, James E. Pease, Kack K. Kim, Kathleen Antol, and Byoung S. Kwon

5206 Constitutive Activation of the Janus Kinase-STAT Pathway in T Lymphoma Overexpressing the Lck Protein Tyrosine Kinase
Chao-Lan Yu, Richard Jove, and Steven J. Burakoff

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

5211 Induction of HLA-A2-Restricted CTLs to the Mucin 1 Human Breast Cancer Antigen
Vasso Apostolopoulos, Vaios Karanikas, John S. Haurum, and Ian F. C. McKenzie

5219 The Basis for Self-Tolerance of Natural Killer Cells in β_2-Microglobulin$^-$ and TAP-1$^-$ Mice
Jeffrey R. Dorfman, Jens Zerrahn, Mark C. Coles, and David H. Raulet

5226 Protein-Tyrosine Phosphorylation by IgG1 Subclass CD38 Monoclonal Antibodies Is Mediated Through Stimulation of the FcγII Receptors in Human Myeloid Cell Lines
Shin-ichi Inoue, Kenji Kontani, Noriko Tsujimoto, Yasunari Kanda, Nao Hosoda, Shin-ichi Hoshino, Osamu Hazeki, and Toshiaki Katada

5233 Spectratyping of TCRs Expressed by CTL-Infiltrating Minor Histocompatibility Antigen-Disparate Allografts
Sean L. Johnston, Nancy D. Borson, and Peter J. Wettstein

5246 Apoptotic Cell Death Upon Contact of $CD4^+$ T Lymphocytes with HIV Glycoprotein-Expressing Cells Is Mediated by Caspases but Bypasses CD95 (Fas/Apo-1) and TNF Receptor 1
Hartmut Ohnimus, Martin Heinkelein, and Christian Jassoy

5253 A Dominant-Negative Mutant of the Rab5 GTPase Enhances T Cell Signaling by Interfering with TCR Down-Modulation in Transgenic Mice
Pascale André, Joëlle Boretto, Anne-Odile Hueber, Anne Régnier-Vigouroux, Jean-Pierre Gorvel, Pierre Ferrier, and Philippe Chavrier

5264 Distinct Signal Transduction Pathways Mediate Nuclear Factor-κB Induction by IL-1β in Epithelial and Lymphoid Cells
Giuseppina Bonizzi, Jacques Piette, Marie-Paule Merville, and Vincent Bours

5273 *oct-2* Gene Disruption Eliminates the Peritoneal B-1 Lymphocyte Lineage and Attenuates B-2 Cell Maturation and Function
Patrick O. Humbert and Lynn M. Corcoran

5285 Role of Thy-1 in T Cell Development
Dawne M. Page, Yoshihiro Tokugawa, Jack Silver, and Colin L. Stewart

5293 Acquisition of Granzyme B and Fas Ligand Proteins by Human Keratinocytes Contributes to Epidermal Cell Defense
Christian Berthou, Laurence Michel, Annie Soulié, Francette Jean-Louis, Béatrice Flageul, Louis Dubertret, François Sigaux, Yuehe Zhang, and Marilyme Sasportes

5301 The Mucosal Adjuvanticity of Cholera Toxin Involves Enhancement of Costimulatory Activity by Selective Up-Regulation of B7.2 Expression
Yingzi Cong, Casey T. Weaver, and Charles O. Elson

5309 The p38 Mitogen-Activated Protein Kinase Is Activated by Ligation of the T or B Lymphocyte Antigen Receptors, Fas or CD40, but Suppression of Kinase Activity Does not Inhibit Apoptosis Induced by Antigen Receptors
Ruth A. Salmon, Ian N. Foltz, Peter R. Young, and John W. Schrader

5318 Dissociation of Cytokine Signals for Proliferation and Apoptosis
Yufang Shi, Ruoxiang Wang, Ajay Sharma, Chuan Gao, Mary Collins, Linda Penn, and Gordon B. Mills

5329 Insulin Down-Regulates the Inducible Nitric Oxide Synthase Pathway: Nitric Oxide as Cause and Effect of Diabetes?
R. Brian Stevens, David E. R. Sutherland, Jeffrey D. Ansite, Malinee Saxena, Thomas J. Rossini, Brett K. Levay-Young, Bernhard J. Hering, and Charles D. Mills

5336 Functional Consequences of Dysregulated B7-1 (CD80) and B7-2 (CD86) Expression in B or T Lymphocytes of Transgenic Mice
Luk Van Parijs, Michael P. Sethna, A. Nicola Schweitzer, Frank Borriello, Arlene H. Sharpe, and Abul K. Abbas

5345 T Cell Stimulation via CD47: Agonistic and Antagonistic Effects of CD47 Monoclonal Antibody 1/1A4
Martina Waclavicek, Otto Majdic, Thomas Stulnig, Markus Berger, Thomas Baumruker, Walter Knapp, and Winfried F. Pickl

5355 Structural Requirements for β_1 Integrin-Mediated Tyrosine Phosphorylation in Human T Cells
Lisa D. Finkelstein, Pamela J. Reynolds, Stephen W. Hunt III, and Yoji Shimizu

5364 TAP Peptide Transporter-Independent Presentation of Heat-Killed Sendai Virus Antigen on MHC Class I Molecules by Splenic Antigen-Presenting Cells
Tianmin Liu, Benedict Chambers, Alexander D. Diehl, Luc Van Kaer, Mikael Jondal, and Hans-Gustaf Ljunggren

5372 Identification of Two Distinct Populations of Dendritic Cells in Afferent Lymph That Vary in Their Ability to Stimulate T Cells
Chris J. Howard, Paul Sopp, Joe Brownlie, Lai Shan Kwong, Keith R. Parsons, and Geraldine Taylor

5383 Natural Variants of the Immunodominant HLA A11-Restricted CTL Epitope of the EBV Nuclear Antigen-4 Are Nonimmunogenic Due to Intracellular Dissociation from MHC Class I:Peptide Complexes
Victor Levitsky, Qian-Jin Zhang, Jelena Levitskaya, Michael G. Kurilla, and Maria G. Masucci

5391 Processing of Engulfed Apoptotic Bodies Yields T Cell Epitopes
Matteo Bellone, Giandomenica Iezzi, Patrizia Rovere, Giacomo Galati, Anna Ronchetti, Maria Pia Protti, Jean Davoust, Claudio Rugarli, and Angelo A. Manfredi

MOLECULAR AND STRUCTURAL IMMUNOLOGY

5400 Leech Immunocytes Contain Proopiomelanocortin: Nitric Oxide Mediates Hemolymph Proopiomelanocortin Processing
Michel Salzet, Beatrice Salzet-Raveillon, Claude Cocquerelle, Martine Verger-Bocquet, Stephen C. Pryor, Christos M. Rialas, Virginie Laurent, and George B. Stefano

5412 Evidence for Multiple Promoters of the Human IL-5 Receptor α Subunit Gene: A Novel 6-Base Pair Element Determines Cell-Specific Promoter Function
Ji Zhang, Reshma Kuvelkar, Boonlert Cheewatrakoolpong, Shirley Williams, Robert W. Egan, and M. Motasim Billah

5422 Molecular Analysis of V Gene Sequences Encoding Cytotoxic Anti-Streptococcal/Anti-Myosin Monoclonal Antibody 36.2.2 That Recognizes the Heart Cell Surface Protein Laminin
Susan M. Antone, Elisabeth E. Adderson, Nadja M. J. Mertens, and Madeleine W. Cunningham

5431 δ-Opioid Receptors Expressed by Jurkat T Cells Enhance IL-2 Secretion by Increasing AP-1 Complexes and Activity of the NF-AT/AP-1-Binding Promoter Element
Karen E. Hedin, Michael P. Bell, Kimberly R. Kalli, Catherine J. Huntoon, Burt M. Sharp, and David J. McKean

5441 Cloning and Analysis of the Promoter Region of CCR5, a Coreceptor for HIV-1 Entry
Hiroyuki Moriuchi, Masako Moriuchi, and Anthony S. Fauci

5450 Role of Cyclic AMP Response Element-Binding Protein in Cyclic AMP Inhibition of NF-κB-Mediated Transcription
Graham C. N. Parry and Nigel Mackman

5457 The DMB Promoter: Delineation, In Vivo Footprint, *Trans*-Activation, and *Trans*-Dominant Suppression
Jenny P.-Y. Ting, Kenneth L. Wright, Keh-Chuang Chin, W. June Brickey, and Guoxuan Li

5463 Expression of the Leukocyte Early Activation Antigen CD69 Is Regulated by the Transcription Factor AP-1
María del Carmen Castellanos, Cecilia Muñoz, María C. Montoya, Enrique Lara-Pezzi, Manuel López-Cabrera, and Manuel O. de Landázuri

5474 IL-4-Induced STAT6 Suppresses IFN-γ-Stimulated STAT1-Dependent Transcription in Mouse Macrophages
Yoshihiro Ohmori and Thomas A. Hamilton

5483 Augmentation of Dendritic Cells in Murine Organ Donors by Flt3 Ligand Alters the Balance Between Transplant Tolerance and Immunity
Raymond J. Steptoe, Fumin Fu, Wei Li, Maureen L. Drakes, Lina Lu, A. Jake Demetris, Shiguang Qian, Hilary J. McKenna, and Angus W. Thomson

5492 Transcriptional Regulation of the Complement Receptor 2 Gene: Role of a Heterogeneous Nuclear Ribonucleoprotein
Mate Tolnay, John D. Lambris, and George C. Tsokos

5502 Differential Induction of DNA-Binding Activities Following CD19 Cross-Linking in Human B Lineage Cells
Wen-Kai Weng, Nisha Shah, Darin O'Brien, Brian Van Ness, and Tucker W. LeBien

HOST DEFENSE

5509 Adoptive Transfer of In Vitro-Targeted, Activated T Lymphocytes Results in Total Tumor Regression
Uwe Altenschmidt, Elfriede Klundt, and Bernd Groner

5516 TCR Vaccines for Active Immunotherapy of T Cell Malignancies
Craig Y. Okada, Carmen P. Wong, Dan W. Denney, and Ronald Levy

5528 IL-18 Protects Mice Against Pulmonary and Disseminated Infection with *Cryptococcus neoformans* by Inducing IFN-γ Production
Kazuyoshi Kawakami, Mahboob Hossain Qureshi, Tiantuo Zhang, Haruki Okamura, Masashi Kurimoto, and Atsushi Saito

5535 A Cryptic T Cell Epitope on the Apical Membrane Antigen 1 of *Plasmodium chabaudi adami* Can Prime for an Anamnestic Antibody Response: Implications for Malaria Vaccine Design
Fiona H. Amante, Pauline E. Crewther, Robin F. Anders, and Michael F. Good

5545 Targeting of Cytotoxic T Cells Against Leukemic B Cells by Bispecific Antibody (aCD3 × aCD19) Does not Distract the T Cell From Its Primary Target
S. C. Klein, S. H. van der Burg, L. H. Boer, C. J. M. Melief, W. M. Kast, G. C. de Gast, and E. J. E. G. Bast

5550 Involvement of Mitogen-Activated Protein Kinase Pathways in the Nuclear Responses and Cytokine Production Induced by *Salmonella typhimurium* in Cultured Intestinal Epithelial Cells
Silke Hobbie, Li Mei Chen, Roger J. Davis, and Jorge E. Galán

INFLAMMATION

5560 Functional Properties of Human Intestinal Mast Cells Cultured in a New Culture System: Enhancement of IgE Receptor-Dependent Mediator Release and Response to Stem Cell Factor
Stephan C. Bischoff, Silke Schwengberg, Rudolf Raab, and Michael P. Manns

5568 β_2 Integrins Are Not Required for Tyrosine Phosphorylation of Paxillin in Human Neutrophils
Rosemarie Fernandez, Laurence A. Boxer, and Suzanne J. Suchard

5576 Characterization of the CCR2 Chemokine Receptor: Functional CCR2 Receptor Expression in B Cells
Jose M. R. Frade, Mario Mellado, Gustavo del Real, Jose C. Gutierrez-Ramos, Peter Lind, and Carlos Martinez-A.

5585 Alteration of the Cytokine Phenotype in an Experimental Lung Granuloma Model by Inhibiting Nitric Oxide
Cory M. Hogaboam, Stephen W. Chensue, Matthew L. Steinhauser, Gary B. Huffnagle, Nicholas W. Lukacs, Robert M. Strieter, and Steven L. Kunkel

5594 C1q Augments Platelet Activation in Response to Aggregated Ig
Ellinor I. B. Peerschke and Berhane Ghebrehiwet

5599 Interchangeable Endotoxin-Binding Domains in Proteins with Opposite Lipopolysaccharide-Dependent Activities
Ralf R. Schumann, Norbert Lamping, and Adolf Hoess

5606 Human Alternative Complement Pathway-Mediated Lysis of Rabbit Erythrocytes Is Enhanced by Natural Anti-Galα1–3Gal Antibodies
Stephen Tomlinson and Victor Nussenzweig

5610 Aberrant Cytokine Expression and Autocrine Regulation Characterize Macrophages from Young MRL$^{+/+}$ and NZB/W F_1 Lupus-Prone Mice
David G. Alleva, Steven B. Kaser, and David I. Beller

5620 Thrombin Activates Nuclear Factor-κB and Potentiates Endothelial Cell Activation by TNF
Dorothea Anrather, Maria T. Millan, Alois Palmetshofer, Simon C. Robson, Carolyn Geczy, Andrew J. Ritchie, Fritz H. Bach, and Bruce M. Ewenstein

5629 Generation of HER-2/*neu*-Specific Cytotoxic Neutrophils In Vivo: Efficient Arming of Neutrophils by Combined Administration of Granulocyte Colony-Stimulating Factor and Fcγ Receptor I Bispecific Antibodies
Ingmar A. F. M. Heijnen, Leonie J. M. Rijks, Anja Schiel, Bernhard Stockmeyer, Heidi H. van Ojik, Michael Dechant, Thomas Valerius, Tibor Keler, Alison L. Tutt, Martin J. Glennie, Eric A. van Royen, Peter J. A. Capel, and Jan G. J. van de Winkel

5640 CD40 Ligand Stimulates Proinflammatory Cytokine Production by Human Endothelial Cells
Julie Déchanet, Christophe Grosset, Jean-Luc Taupin, Pierre Merville, Jacques Banchereau, Jean Ripoche, and Jean-François Moreau

5648 Oncostatin M Stimulates the Expression and Release of the IL-6 Receptor in Human Hepatoma HepG2 Cells
Joanna Cichy, Stefan Rose-John, Jan Potempa, Juliusz Pryjma, and James Travis

5654 Human Monocytes and Macrophages Express Substance P and Neurokinin-1 Receptor
Wen-Zhe Ho, Jian-Ping Lai, Xian-Hua Zhu, Marina Uvaydova, and Steven D. Douglas

5661 IL-11 Regulates Macrophage Effector Function Through the Inhibition of Nuclear Factor-κB
William L. Trepicchio, LiLi Wang, Mary Bozza, and Andrew J. Dorner

5671 Identification of a New Mouse β-Chemokine, Thymus-Derived Chemotactic Agent 4, with Activity on T Lymphocytes and Mesangial Cells
Shigeyuki Tanabe, Zhijian Lu, Yi Luo, Elizabeth J. Quackenbush, Michael A. Berman, Lisa A. Collins-Racie, Sha Mi, Christina Reilly, David Lo, Kenneth A. Jacobs, and Martin E. Dorf

CLINICAL IMMUNOLOGY

5682 Protective Antibodies Develop, and Murine Lyme Arthritis Regresses, in the Absence of MHC Class II and $CD4^+$ T Cells
Erol Fikrig, Stephen W. Barthold, Manchuan Chen, Cheong-Hee Chang, and Richard A. Flavell

5687 Suppression of Collagen-Induced Arthritis by Continuous Administration of IL-4
Angela C. Horsfall, Debra M. Butler, Lilia Marinova, Paul J. Warden, Richard O. Williams, Ravinder N. Maini, and Marc Feldmann

5697 Induction of High Affinity Fibroblast Growth Factor Receptor Expression and Proliferation in Human Endothelial Cells by Anti-HLA Antibodies: A Possible Mechanism for Transplant Atherosclerosis
Paul E. Harris, Hong Bian, and Elaine F. Reed

5705 Priming with IL-4 and IL-13 During HIV-1 Infection Restores In Vitro IL-12 Production by Mononuclear Cells of HIV-Infected Patients
Jason D. Marshall, Susan E. Robertson, Giorgio Trinchieri, and Jihed Chehimi

5715 A Single Nonamer from the *Yersinia* 60-kDa Heat Shock Protein Is the Target of HLA-B27-Restricted CTL Response in *Yersinia*-Induced Reactive Arthritis
Sanja Ugrinovic, Andreas Mertz, Peihua Wu, Jürgen Braun, and Joachim Sieper

5724 IgE from Latex-Allergic Patients Binds to Cloned and Expressed B Cell Epitopes of Prohevein
Banani Banerjee, Xudong Wang, Kevin J. Kelly, Jordan N. Fink, Gordon L. Sussman, and Viswanath P. Kurup

5733 Cell Death During Autoimmune Demyelination: Effector but Not Target Cells Are Eliminated by Apoptosis
Bruno Bonetti, Jürgen Pohl, Yan-Ling Gao, and Cedric S. Raine

5742 Ligation of Cell Surface CD4 Inhibits Activation-Induced Death of Human T Lymphocytes at the Level of Fas Ligand Expression
Hans-Heinrich Oberg, Ralf Sanzenbacher, Beate Lengl-Janßen, Thomas Dobmeyer, Sven Flindt, Ottmar Janssen, and Dieter Kabelitz

5750 Notice of Duplicate Publication

5751 Author Index

VOLUME 159 / Nº 12 / DECEMBER 15, 1997

CUTTING EDGE

5761 Cutting Edge: Induction of IL-10 Synthesis by Human Keratinocytes Through CD23 Ligation: A Cyclic Adenosine 3′,5′-Monophosphate-Dependent Mechanism
Pierre-André Bécherel, Liliane LeGoff, Camille Francès, Olivier Chosidow, Jean-Jacques Guillosson, Patrice Debré, M. Djavad Mossalayi, and Michel Arock

5766 Cutting Edge: Genetic Variation Among 129 Substrains: Practical Consequences
Joan M. G. Sechler, Jason C. Yip, and Amy S. Rosenberg

5769 Cutting Edge: Selective Involvement of Proteasomes and Cysteine Proteases in MHC Class I Antigen Presentation
Daniel López and Margarita Del Val

5773 Cutting Edge: A Role for Ras Signaling in Coreceptor Regulation During Differentiation of a Double-Positive Thymocyte Cell Line
Hui Shao, Elyssa M. Rubin, Ling-Yu Chen, and Jonathan Kaye

5777 Cutting Edge: Immunostimulatory Effects of a Plasmid Expressing CD40 Ligand (CD154) on Gene Immunization
Robert B. Mendoza, Mark J. Cantwell, and Thomas J. Kipps

5782 Cutting Edge: Engagement of CD40 Antigen with Soluble CD40 Ligand Up-Regulates Peptide Transporter Expression and Restores Endogenous Processing Function in Burkitt's Lymphoma Cells
Rajiv Khanna, Leanne Cooper, Nobert Kienzle, Denis J. Moss, Scott R. Burrows, and Kum Kum Khanna

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

5787 Evidence That the Same γδ T Cells Respond During Infection-Induced and Autoimmune Inflammation
Akiko Mukasa, Michael Lahn, Elizabeth K. Pflum, Willi Born, and Rebecca L. O'Brien

5795 V_H Gene Replacement in Hyperselected B Cells of the Quasimonoclonal Mouse
Marilia Cascalho, Jamie Wong, and Matthias Wabl

5802 Distinct Biochemical Signals Characterize Agonist- and Altered Peptide Ligand-Induced Differentiation of Naive $CD4^+$ T Cells into Th1 and Th2 Subsets
Yvan Boutin, David Leitenberg, Xiang Tao, and Kim Bottomly

5810 Resting B Cells From Autoimmune Lupus-Prone New Zealand Black and (New Zealand Black × New Zealand White)F_1 Mice Are Hyper-Responsive to T Cell-Derived Stimuli
Jenny Jongstra-Bilen, Brian Vukusic, Kata Boras, and Joan E. Wither

5821 Anti-CD3ϵF(ab′)$_2$ Fragments Inhibit T Cell Expansion in Vivo During Graft-Versus-Host Disease or the Primary Immune Response to Nominal Antigen
Bruce R. Blazar, Marc K. Jenkins, Patricia A. Taylor, Jennifer White, Angela Panoskaltsis-Mortari, Robert Korngold, and Daniel A. Vallera

5834 In Vivo Effects of T Helper Cell Type 2 Cytokines on Macrophage Antigen-Presenting Cell Induction of T Helper Subsets
Daniel J. Cua and Stephen A. Stohlman

5841 Immunohistochemical Analysis of In Vivo Patterns of TRAF-3 Expression, a Member of the TNF Receptor-Associated Factor Family
Stanislaw Krajewski, Juan M. Zapata, Maryla Krajewska, Todd VanArsdale, Ahmed Shabaik, Randy D. Gascoyne, and John C. Reed

5853 Antigen Presentation by Epithelial Cells Induces Anergic Immunoregulatory $CD45RO^+$ T Cells and Deletion of $CD45RA^+$ T Cells
Federica M. Marelli-Berg, Anthony Weetman, Loredana Frasca, Sarah J. Deacock, Nesrina Imami, Giovanna Lombardi, and Robert I. Lechler

5862 TCR Vα24 and Vβ11 Coexpression Defines a Human NK1 T Cell Analog Containing a Unique Th0 Subpopulation
Calman Prussin and Barbara Foster

5871 Cyclic-AMP Modulates Downstream Events in CD40-Mediated Signal Transduction, but Inhibition of Protein Kinase A Has no Direct Effect on CD40 Signaling
Marni D. Goldstein, Alan Cochrane, and Tania H. Watts

5881 Early and Late Events in FcϵRI Signal Transduction in Human Cultured Mast Cells
Hidefumi Suzuki, Masao Takei, Makoto Yanagida, Tatsutoshi Nakahata, Toshiaki Kawakami, and Hiromi Fukamachi

5889 Pharmacological Control of Antigen Responsiveness in Genetically Modified T Lymphocytes
Luis Alvarez-Vallina, Siamak Agha-Mohammadi, Robert E. Hawkins, and Stephen J. Russell

5896 Proteasome Activity Limits the Assembly of MHC Class I Molecules After IFN-γ Stimulation
Adam M. Benham and Jacques J. Neefjes

5905 Mouse IL-1 Receptor Antagonist Isoforms: Complementary DNA Cloning and Protein Expression of Intracellular Isoform and Tissue Distribution of Secreted and Intracellular IL-1 Receptor Antagonist In Vivo
Cem Gabay, Brandon Porter, Giamila Fantuzzi, and William P. Arend

5914 Single Amino Acid Mutations in the Murine MHC Class II Aβ Cytoplasmic Domain Abrogate Antigen Presentation
Terri M. Laufer, Stephen T. Smiley, Ann Ranger, Virginia K. Clements, Suzanne Ostrand-Rosenberg, and Laurie H. Glimcher

5921 Effects of CD28 Costimulation on Long-Term Proliferation of $CD4^+$ T Cells In the Absence of Exogenous Feeder Cells
Bruce L. Levine, Wendy B. Bernstein, Mark Connors, Nancy Craighead, Tullia Lindsten, Craig B. Thompson, and Carl H. June

5931 Role for IL-15/IL-15 Receptor β-Chain in Natural Killer 1.1^+ T Cell Receptor-$\alpha\beta^+$ Cell Development
Toshiaki Ohteki, Shirley Ho, Haruhiko Suzuki, Tak W. Mak, and Pamela S. Ohashi

5936 Maternal Immunization With a Soluble TCR-Ig Chimeric Protein: Long Term, Vβ-8 Family-Specific Suppression of T Cells by Maternally Transferred Antibodies
Una McKeever, Sanjay Khandekar, Michael Jesson, John Newcomb, Paul Gregory, Jerome Naylor, Kathryn Haskins, and Barry Jones

5946 IgA Plasma Cells in Vascular Tissue of Patients with Kawasaki Syndrome
Anne H. Rowley, Carrie A. Eckerley, Hans-Martin Jäck, Stanford T. Shulman, and Susan C. Baker

5956 Strength of TCR Signal Determines the Costimulatory Requirements for Th1 and Th2 $CD4^+$ T Cell Differentiation
Xiang Tao, Stephanie Constant, Patricia Jorritsma, and Kim Bottomly

5964 IL-1β-Converting Enzyme (ICE) Is Present and Functional in Human Alveolar Macrophages: Macrophage IL-1β Release Limitation Is ICE Independent
Mark D. Wewers, Heidi A. Dare, Alissa V. Winnard, Jennifer M. Parker, and Douglas K. Miller

5973 Human Thymocytes Become Lineage Committed at an Early Postselection $CD69^+$ Stage, Before the Onset of Functional Maturation
Dominique Vanhecke, Bruno Verhasselt, Magda De Smedt, Georges Leclercq, Jean Plum, and Bart Vandekerckhove

5984 Exploiting the Difference Between Intrinsic and Extrinsic Kinases: Implications for Regulation of Signaling by Immunoreceptors
Carla Wofsy, Chikako Torigoe, Ute M. Kent, Henry Metzger, and Byron Goldstein

5993 Activation-Related Differences in HLA Class I-Bound Peptides: Presentation of an IL-1 Receptor Antagonist-Derived Peptide by Activated, but Not Resting, $CD4^+$ T Lymphocytes
Guido Frumento, Anna Corradi, Giovanni B. Ferrara, and Anna Rubartelli

6000 CD40 and IL-4 Regulate Murine CD27L Expression
Udo F. Hartwig, Lars Karlsson, Per A. Peterson, and Susan R. Webb

6009 CD94/NKG2 Inhibitory Receptor Complex Modulates Both Anti-Viral and Anti-Tumoral Responses of Polyclonal Phosphoantigen-Reactive Vγ9Vδ2 T Lymphocytes
Fabrizio Poccia, Barbara Cipriani, Silvia Vendetti, Vittorio Colizzi, Yannick Poquet, Luca Battistini, Miguel López-Botet, Jean-Jacques Fournié, and Marie-Lise Gougeon

6018 Independent Regulation of Cutaneous Lymphocyte-Associated Antigen Expression and Cytokine Synthesis Phenotype During Human $CD4^+$ Memory T Cell Differentiation
Yuichi Teraki and Louis J. Picker

6030 Identification of Shared Tumor-Associated Antigen Peptides Between Two Spontaneous Lung Carcinomas
Ofer Mandelboim, Erez Bar-Haim, Ezra Vadai, Mati Fridkin, and Lea Eisenbach

6037 Deoxyribonucleic Acid Vaccines Encoding Antigens With Rapid Proteasome-Dependent Degradation Are Highly Efficient Inducers of Cytolytic T Lymphocytes
Yunqi Wu and Thomas J. Kipps

MOLECULAR AND STRUCTURAL IMMUNOLOGY

6044 Complex Origin of the *HLA-DR10* Haplotype
Rafael Gongora, Felipe Figueroa, and Jan Klein

6052 Linkage of *LMP*, *TAP*, and *RING3* with *Mhc* Class I Rather Than Class II Genes in the Zebrafish
Kimitaka Takami, Zofia Zaleska-Rutczynska, Felipe Figueroa, and Jan Klein

6061 κ and λ Rearrangement Occur Simultaneously in Transformed Pre-B Cells
Dan Liu, Jenia Jenab, and Naomi Rosenberg

6070 Determination of Adenosine Deaminase Binding Domain on CD26 and Its Immunoregulatory Effect on T Cell Activation
Rui-Ping Dong, Kouichi Tachibana, Martin Hegen, Yasuhiko Munakata, Donny Cho, Stuart F. Schlossman, and Chikao Morimoto

6077 Comparison of the Roles of CD8αα and CD8αβ in Interaction With MHC Class I
Jiaren Sun and Paula B. Kavathas

6083 Influence of V_H CDR3 Arginine and Light Chain Pairing on DNA Reactivity of a Bacterial DNA-Induced Anti-DNA Antibody from a BALB/c Mouse
Mary Kopke Wloch, Stephen H. Clarke, and Gary S. Gilkeson

6091 Characterization of the IFN-γ-Responsive Element in the 5′ Flanking Region of the C1 Inhibitor Gene
Kamyar Zahedi, Anne E. Prada, Jorge A. Prada, and Alvin E. Davis III

6097 Identification of Class I Genes in Cartilaginous Fish, the Most Ancient Group of Vertebrates Displaying an Adaptive Immune Response
Simona Bartl, Meredith A. Baish, Martin F. Flajnik, and Yuko Ohta

HOST DEFENSE

6105 A Filarial Nematode Secreted Product Differentially Modulates Expression and Activation of Protein Kinase C Isoforms in B Lymphocytes
Maureen R. Deehan, Margaret M. Harnett, and William Harnett

6112 Immune Responses Induced by Intramuscular or Gene Gun Injection of Protective Deoxyribonucleic Acid Vaccines That Express the Circumsporozoite Protein from *Plasmodium berghei* Malaria Parasites
Wolfgang W. Leitner, Matthew C. Seguin, W. Ripley Ballou, John P. Seitz, Angela M. Schultz, Michael J. Sheehy, and Jeffrey A. Lyon

6120 Identification of *Trypanosoma cruzi Trans*-Sialidase Family Members as Targets of Protective $CD8^+$ TC1 Responses
Benjamin Wizel, Marise Nunes, and Rick L. Tarleton

6131 Glycoconjugates Isolated from *Trypanosoma cruzi* but Not from *Leishmania* Species Membranes Trigger Nitric Oxide Synthesis as well as Microbicidal Activity in IFN-γ-Primed Macrophages
Maristela M. Camargo, Ana Cristina Andrade, Igor C. Almeida, Luis R. Travassos, and Ricardo T. Gazzinelli

6140 A Secreted/Shed Product of *Helicobacter pylori* Activates Transcription Factor Nuclear Factor-κB
Anja Münzenmaier, Christina Lange, Erik Glocker, Antonello Covacci, Anthony Moran, Stefan Bereswill, Patrick A. Baeuerle, Manfred Kist, and Heike L. Pahl

INFLAMMATION

6148 Depressed Langerhans Cell Migration and Reduced Contact Hypersensitivity Response in Mice Lacking TNF Receptor p75
Binghe Wang, Hiroshi Fujisawa, Lihua Zhuang, Seiji Kondo, Gulnar M. Shivji, Catherine S. Kim, Tak W. Mak, and Daniel N. Sauder

6156 Regulation of IL-18 (IFN-γ-Inducing Factor) Gene Expression
Masahide Tone, Sara A. J. Thompson, Yukiko Tone, Paul J. Fairchild, and Herman Waldmann

6164 EBV Induces the Production and Release of IL-8 and Macrophage Inflammatory Protein-1α in Human Neutrophils
Shaun R. McColl, Charles J. Roberge, Bernard Larochelle, and Jean Gosselin

6169 Second-Hand Smoke Is an Adjuvant for T Helper-2 Responses in a Murine Model of Allergy
Brian W. P. Seymour, Kent E. Pinkerton, Kathleen E. Friebertshauser, Robert L. Coffman, and Laurel J. Gershwin

6176 Recognition of the E-C4 Element from the C4 Complement Gene Promoter by the Upstream Stimulatory Factor-1 Transcription Factor
Marie-Dominique Galibert, Laurent Boucontet, Colin R. Goding, and Tommaso Meo

6184 Cytokine Induction of the Ability of Human Monocyte CD44 to Bind Hyaluronan Is Mediated Primarily by TNF-α and Is Inhibited by IL-4 and IL-13
Marc C. Levesque and Barton F. Haynes

6195 Calcium-Dependent Neutrophil Secretion: Characterization and Regulation by Annexins
Jesusa L. Rosales and Joel D. Ernst

6203 Induction of Biologically Active IL-1β-Converting Enzyme and Mature IL-1β in Human Keratinocytes by Inflammatory and Immunologic Stimuli
Karoline Zepter, Andreas Häffner, Lillian F. Soohoo, Dennis De Luca, Hai-Ping Tang, Paul Fisher, Jill Chavinson, and Craig A. Elmets

6209 Extracellular ATP and UTP Control the Generation of Reactive Oxygen Intermediates in Human Macrophages Through the Opening of a Charybdotoxin-Sensitive Ca^{2+}-Dependent K^+ Channel
Heidy Schmid-Antomarchi, Annie Schmid-Alliana, Georges Romey, Marie-Angelès Ventura, Violette Breittmayer, Marie-Ange Millet, Hervé Husson, Baharia Moghrabi, Michel Lazdunski and Bernard Rossi

6216 Potent Induction of a Neutrophil and Eosinophil-Rich Infiltrate In Vivo by Human Mast Cell Tryptase: Selective Enhancement of Eosinophil Recruitment by Histamine
Shaoheng He, Qi Peng, and Andrew F. Walls

6226 IFN-γ and IL-10 Inhibit Induction of IL-1 Receptor Type I and Type II Gene Expression by IL-4 and IL-13 in Human Monocytes
Harold L. Dickensheets and Raymond P. Donnelly

CLINICAL IMMUNOLOGY

6236 TNF and Lymphotoxin-α Polymorphisms Associated with Common Variable Immunodeficiency: Role in the Pathogenesis of Granulomatous Disease
Charles G. Mullighan, Gregory C. Fanning, Helen M. Chapel, and Kenneth I. Welsh

6242 Identification and Characterization of Multiple HLA-A24-Restricted HIV-1 CTL Epitopes: Strong Epitopes Are Derived from V Regions of HIV-1
Yuki Ikeda-Moore, Hiroko Tomiyama, Kiyoshi Miwa, Shinichi Oka, Aikichi Iwamoto, Yutaro Kaneko, and Masafumi Takiguchi

6253 Suppression of TNF-α Expression, Inhibition of Th1 Activity, and Amelioration of Collagen-Induced Arthritis by Rolipram
Susan E. Ross, Richard O. Williams, Lesley J. Mason, Claudia Mauri, Lilia Marinova-Mutafchieva, Anne-Marie Malfait, Ravinder N. Maini, and Marc Feldmann

6260 Diminished Class II-Associated Ii Peptide Binding to the Juvenile Dermatomyositis HLA-DQα10501/DQβ10301 Molecule
Ann M. Reed, Edward J. Collins, Lisa P. Shock, David G. Klapper, and Jeffrey A. Frelinger

6266 Inhibition of Inducible Nitric Oxide Synthase Intensifies Injury and Functional Deterioration in Autoimmune Interstitial Nephritis
Francis B. Gabbai, Cesar Boggiano, Thomas Peter, Ser Khang, Clay Archer, Daniel P. Gold, and Carolyn J. Kelly

6276 A Role for TNF-α and Mucosal T Helper-1 Cytokines in the Pathogenesis of Crohn's Disease
Scott E. Plevy, Carol J. Landers, John Prehn, Nelson M. Carramanzana, Richard L. Deem, David Shealy, and Stephan R. Targan

6283 Association of $CD4^+$ T Cell-Dependent Keratitis with Genetic Susceptibility to *Pseudomonas aeruginosa* Ocular Infection
Byungsuk Kwon and Linda D. Hazlett

6291 Demonstration and Functional Analysis of IL-10 Receptors in Human Epidermal Cells: Decreased Expression in Psoriatic Skin, Down-Modulation by IL-8, and Up-Regulation by an Antipsoriatic Glucocorticosteroid in Normal Cultured Keratinocytes
Günter Michel, Alireza Mirmohammadsadegh, Edit Olasz, Beata Jarzebska-Deussen, Anke Müschen, Lajos Kemény, Harry F. Abts, and Thomas Ruzicka

6298 TNF-α Down-Regulates Type 1 Cytokines and Prolongs Survival of Syngeneic Islet Grafts in Nonobese Diabetic Mice
Alex Rabinovitch, Wilma L. Suarez-Pinzon, Ole Sorensen, Ray V. Rajotte, and Robert F. Power

6304 Author Index

6306 Ad Hoc Reviewers

6312 Author Index to Volume 159

6328 Subject Index to Volume 159